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GRASS-THATCHED HUTS AT LOS PUENTES.

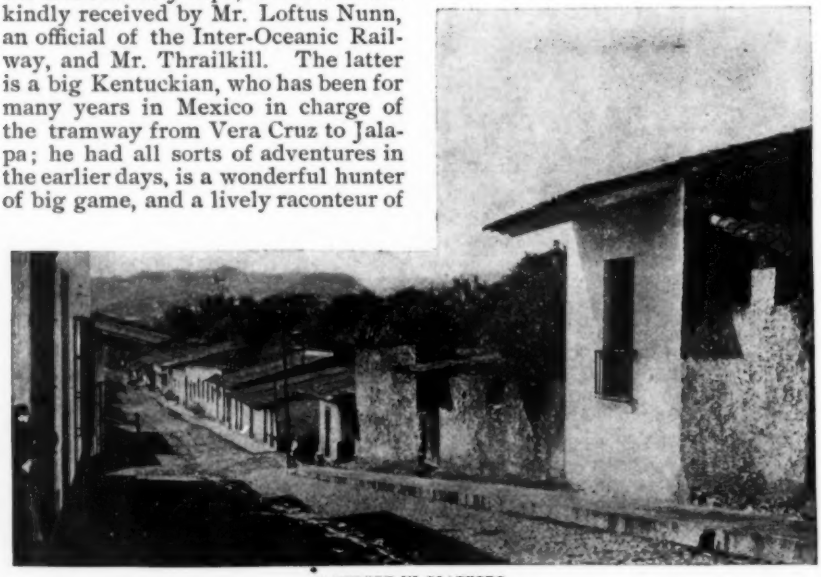
VILLAGE LIFE IN MEXICO.

BY ARTHUR INKERSLEY.

TO reach Coatepec from Vera Cruz, on Christmas Eve, it was necessary to get up at daylight and have our baggage carried by *cargadores*, or porters, to the station of the Inter-Oceanic Railway. For some little distance out from the city of Vera Cruz we passed over sand-hills. When these had been traversed, we got out into a green country dotted with palm-trees and cottages thatched with palm-leaves. In the *tierra caliente* no more substantial habitations than these huts are needed. The track passes through the old national road by way of Cerro Gordo, where General Scott defeated the Mexican General Santa Ana on the 18th of April, 1847. At many points along the track are seen tiny cairns, erected to commemorate some death by violence. When a native finds a dead body he piles a little heap of stones upon it, and each subsequent passer-by adds a stone or two. On the top of the pile a rude wooden cross is placed. At the little way-stations small crowds of natives

A PEDLER.

gather, to whom the trains have not yet ceased to be objects of wonder and interest. The Antigua River is crossed by a fine iron bridge a hundred metres in length, which was manufactured in England and put together on the spot. As we advanced further from the coast, the ascent became steeper and the country bolder; the track began to climb up hill-sides and to pass through deep cuts, often made through solid rock. Now and then the view opened out, and gave us command of wide stretches of country, in which occasionally cattle were seen feeding. After reaching the highest point the descent is made by long curves, through very pretty country, perfectly green and fresh. Soon Orizaba's snow-capped peak, an almost perfect cone, came into view, and except when hidden by clouds was visible for all the rest of the journey. The vegetation is everywhere thick, rich, and luxuriant, the moisture being sufficient to keep it in a state of continual verdure very refreshing to eyes wearied by the arid aspect of the Valley of Mexico or of the environs of Vera Cruz. When the track gets clear, as from time to time it does, of the bower of vegetation through which it cuts its path, wide views reaching far away on one side to the mountains that hem in the Valley of Mexico, or to the waters of the Gulf on the other, are obtained: the distant ranges look purple in the haze, and the peak of Orizaba is often so obscured by clouds that its situation can scarcely be made out with certainty. The ride is a beautiful one, and becomes more so as the train nears Jalapa, where we were kindly received by Mr. Loftus Nunn, an official of the Inter-Oceanic Railway, and Mr. Thrailkill. The latter is a big Kentuckian, who has been for many years in Mexico in charge of the tramway from Vera Cruz to Jalapa; he had all sorts of adventures in the earlier days, is a wonderful hunter of big game, and a lively raconteur of



A STREET IN COATEPEC.

big stories. To support his statements it is his custom to appeal to a Mexican servant of his, who to the question, "Is it not so, Ramon?" always discreetly replies, "Si, señor."

Leaving our baggage at the station, we walked up a winding, hilly, picturesque stretch to Mr. Nunn's house, where we took lunch, meeting his wife and sister, the latter a delightful girl just out from England on a visit to her brother. Their house is a charming, roomy old place, part of the walls of which belonged to a convent. The garden contains a large stone bath, supplied with water by a perennial stream, the surplus running out into a public fountain on the street. It is partly surrounded by high old stone walls and commands a glorious view. The wide plain at our feet stretches away to the sea; the rolling hills are dominated by the commanding height of Orizaba and the glorious peak of Ixtaccihuatl —the white woman. A broad piazza looks onto the garden, and here in lounges and hammocks the family spend much of their time. The drawing-room contains one of the very few fire-grates to be found in Jalapa.

NEAR COATEPEC BRIDGE.

Jalapa—the place of water and land—has many charms and is a favorite health-resort, many Vera Cruzans maintaining houses both in Jalapa and in the Gulf city. The streets are steep, quaint, and winding, and the air of the highlands is healthful and invigorating. The city has a permanent population of 14,000, but this number is increased at certain seasons of the year. There is a fine cathedral and several handsome churches, most of which were built by Cortes and his followers. But the confiscation of church property has caused many of the sacred edifices to fall into ruin; for when a tower is thrown down by an earthquake or lapses from natural decay, no repairs are made. Near the cathedral a pretty little plaza, with an ornamental bandstand and stone seats, has been made. The convent of San Francisco in the middle of the city was formerly the seat of a powerful and wealthy monastic fraternity, but it is now shorn of its revenues and influence.

The Municipal Palace—for Jalapa is the capital, though not the largest city, of the important State of Vera Cruz—is a large building in the pseudo-classical style, and contains, as I was told, some handsome rooms, in which occasional entertainments are given by the governor, whose official residence it is. The governor receives a salary of $6,000 a year. The last governor had, in addition to this, $6,000 more, his pay as a general in the Mexican army. The deputies to the State legislature meet in Jalapa, and receive a salary of $250 a month each.

Here, too, is a normal school for the training of teachers, who in the earlier days of the republic were very ignorant, knowing the church catechism and very little besides. Each canton sends two pupils to the normal school, and each pupil is allowed $40 a month for expenses: at the end of the course they must go wherever the government sends them to teach.

Besides its pretty streets, winding

irregularly up and down the hillsides, its splendid views of Orizaba and of that singular box-shaped peak, the Cofre de Perote, and its substantial stone houses, Jalapa is famous as having the most beautiful flowers and the most lovely women in all Mexico. Vanilla grows wild in its forests, and the gathering of it affords a large revenue and constitutes an important industry. Its flowers are greenish-yellow, with spots of white, and grow upon a climbing stalk. The pods grow in pairs and are as large around as a man's little finger. They vary in length, but six inches may be taken as an average. At first the pods are green, but they turn to yellow, and finally to brown. They are dried in the sun, and while drying are touched with palm-oil, which imparts to them a brilliant gloss. Every one knows the delicate flavor which vanilla gives to the wares of the great French manufacturer of whom Parisian wits said that, while Fame had stamped her mark upon Thiers, Menier had stamped *his* upon chocolate. Jalap, a medicinal plant well known in nurseries, is native to Jalapa, and derives its name from the city. The luxuriant vegetation, brilliant flowers, and glowing complexions of the women of Jalapa are largely due to the moisture of the atmosphere, in fact to the same cause to which the belles of Devonshire, Ireland, and Tasmania owe their reputation. On the highlands that overlook the *tierras calientes*, a drizzle called *chipi-chipi* is of constant occurrence and keeps every green thing fresh. Jalapa also abounds in singing-birds, often of very bright plumage, which does not in Mexico, as in most countries, imply a lack of sweet voice. Many of these singing-birds are kept in cages in the houses, and at the hotels are somewhat of a nuisance to the tourist who wants to sleep in the early morning. Of course, most Mexican women, whether of Spanish or Indian origin, are copper-colored, but Jalapa boasts of many fair-haired beauties with blond complexions and blue eyes.

COTTAGE DOOR AT CHAPULTEPEC.

The chill of evening comes on suddenly in Mexico as soon as the sun goes down, and some care must be exercised by the visitor in exposing himself to the night air. The natives, though they wear very light clothing during the day, when the coolness of night comes on wrap themselves up well, the women in their rebosos or blue-fringed shawls, and the men in their blanket-like vari-colored serapes. The *vomito*, or deadly yellow fever, so common at Vera Cruz, is almost unknown in the healthy air of Jalapa and Orizaba, yet, curiously enough, if a man who has been attacked by the *vomito* in the lowlands moves up to the highlands, he almost invariably dies.

The house-windows in Jalapa, as in most Mexican cities, are protected by bars of iron or wood, and have little balconies, upon which the maidens sit or stand while some

SUGAR FACTORY AT COATEPEC.

youthful admirer "plays bear" in the street below. This silent flirtation by means of bows, gestures, sighs, fan, and flowers is sometimes carried on for many months before the young couple meet.

A common feature of a Mexican town is the public washing-place. Round two or three sides of a small square are white pillars supporting a red-tiled roof. The roof shelters two rows of tanks placed at a height convenient to a woman standing up: the tanks have marble floors built on a slope. On the grass of the inclosed square the clothes are spread out to dry. The women bring their own soap, but water is obtained from the public pump.

We were sorry to hurry away from Jalapa and our kind hosts, but it was necessary for us to be getting on to Coatepec. Accordingly at a few minutes to 3 P.M. we presented ourselves at the office of the mule-car line running between Jalapa and Co-

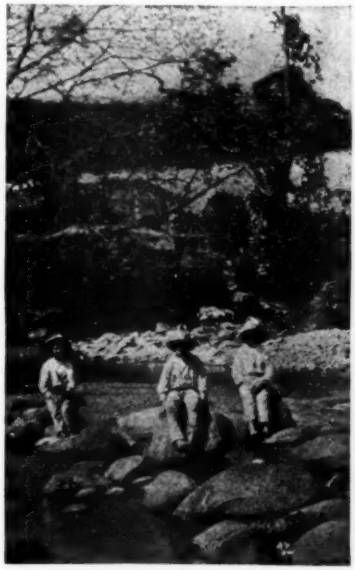
COFRE DE PEROTE FROM COATEPEC.

atepec, but only to learn that the car had started half an hour before. On going up to Mr. Thrailkill's house, he expressed his astonishment at the early departure of the car, but very kindly offered to lend us horses on which to pursue our journey. We accepted his offer, hired a mule to carry our baggage and a *mozo* on horseback to look after the mule. The *mozo* led us over a rough causeway, irregularly paved with stones and in many places slippery with mud. On either hand were copses of fine trees and flowering bushes; the banks were high and dripped with moisture, which caused ferns and mosses to grow most luxuriantly upon them. As we went on, we now and then saw the track of the Inter-Oceanic Railway, and once or twice we crossed it. Sometimes the descents were steep, and the horses slipped about on the mud-covered stones, though my horse, having no shoes, stood up better than those which were shod. On the way we met a few peons on foot carrying burdens, and exchanged "*buenas noches*" with them. When we were about two-thirds of the way to Coatepec darkness came on, but our horses found the way for us. At last we came to a long bridge over a mountain stream, then to the track over which the mule-car from Jalapa runs, and so into the village of Coatepec. After a little blundering about our host came out to us and, receiving us very kindly, showed us into the bedroom assigned to us. This was a large room floored with square red bricks and having two windows, barred from top to bottom, looking onto the street. The house is of two stories and is built in a square about a pretty *patio* adorned with flowers, hanging baskets of ferns, and a little fountain: behind are the coffee-drying floors and some sheds containing a weighing-machine, a coffee-bean sorter, and other apparatus connected with the preparation and buying of coffee. This hospitable house was our home for a week, during which we pottered about studying village life, taking photographs, or playing billiards at the Casino. A Mr. J. V. Brenchley, of North Wales, was also a guest in the house. He

COATEPEC FROM THE CERRO.

has been more than three years in Mexico, employed upon railway engineering. He is an ardent sportsman, and told us many stories of hunting adventures.

Our host is the owner of a large coffee-plantation, and also buys coffee for cash from the small growers, nearly everybody in the district being coffee-raisers. The coffee grown round Coatepec is of excellent quality: three thousand pounds of it were sent as an exhibit to the Chicago Exposition. The coffee-buyers dispose of the coffee they purchase from the small growers to dealers in New Orleans and New York, the magnitude of the dealers' operations being shown by the fact that one house buys 700,000 bags, each containing 130 pounds of coffee, annually. The various grades of coffee sold by the wholesale dealers are produced by mixing different qualities, putting sugar into the roaster with the beans, and by roasting them to a lighter or darker hue.



NEAR THE AQUEDUCT.

The coffee-raising region of Mexico extends from the sea-coast up to a height of 5,000 feet above sea-level. The coffee-tree, however, flourishes best at a height of from 1,000 to 3,000 feet, for here the plant gets that heat and moisture which it requires. In a coffee-plantation all trees more than two years old will be found well laden with fruit. The land for planting can be obtained for about ten dollars an acre, and once planted will go on yielding for years. After clearing the land, plants varying in age from six to twelve months are set out in rows distant eight to ten feet from each other, the plants in the row being about six feet apart. As the young coffee-tree is sensitive to excess of heat, bananas or plantains are set out to give it shade. These grow quickly and in a year yield abundantly so that a revenue begins to come in from them while one is waiting for the coffee. If one is very anxious for quick returns, corn or tobacco may be planted, but it is better not to make too heavy a drain upon the natural richness of the soil, but to be content to wait till the coffee-trees begin to bear. The trees rarely yield much until they are two or three years old, and are not very productive until they are four or five years of age: they reach their highest productiveness in the sixth or seventh year from planting.

In the favored region around Jalapa, Orizaba, and Cordova almost anything will grow. The products of temperate and tropic lands alike can be raised successfully, for the climate is a harmonious and happy blending of the characteristics of both these zones. Mr. Frederick Ober, in his charming book of travels in Mexico, mentions the case of a young man who came from Illinois to Cordova with $3,500 and bought fifty acres of land, half of which he planted with coffee-trees. In due time he found himself the proprietor of a flourishing plantation and enjoying a happy and almost luxurious life in a lovely land.

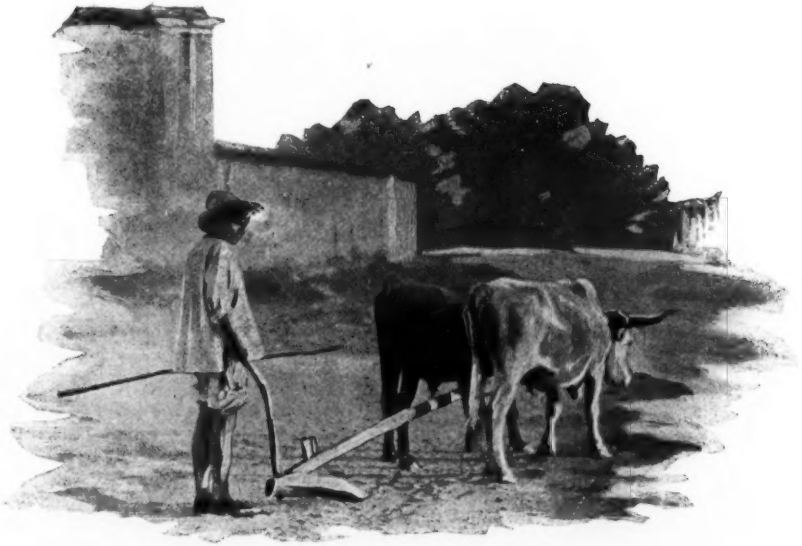
Coffee is not a mere bush, but a

tree, which if allowed to attain its full growth unchecked would reach a height of twenty feet or more; but when it is about six feet above the ground, its further growth is stopped in order that its strength may be husbanded and that the tree may not rise to a height inconvenient for the pickers of its berries. The green berries turn to a deep bright red and are hulled by passing them through a machine: then they are laid out on mats or on concrete floors to dry in the sun. The gathering of the crop goes on from November to April, and during those months in a coffee district the berry is seen everywhere, for nearly every peasant who has land grows more or less coffee. This he sells at a rate per pound according to its quality to a buyer for silver coin, which he generally buries in the ground. In hard times he has to dig out some of his buried treasure, but he always does so with extreme reluctance. The buyer ships the coffee to a wholesale firm, who roast and blend it as already described.

In a Mexican household coffee is made very strong and is served up in a small jug; a few spoonfuls of the concentrated coffee are put into the cup, which is then filled up with hot milk. In the restaurants the waiter brings two pots, one of coffee and the other of boiling milk, and pours from them according to the taste of each customer.

The sugar-cane was introduced into Mexico by Cortes, and the valley of Cuernavaca, where he built his Palacio, is still green with great plantations of cane. In most of the sugar haciendas the machinery is of a primitive kind, but in some of the large establishments, which produce a million pounds of sugar a year, the most modern appliances for crushing the cane and evaporating the juice are found. We walked out one lovely morning from Coatepec to Los Puentes, over a rugged stone causeway, down which came clattering a party of rural guards, heavily armed and well mounted, in attendance upon the governor of the State. Los Puentes is a pretty hamlet, consisting of a sugar factory, thatched cottages, rushing rock-strewn streams, and bridges. I pottered about there a whole morning, finding several views for my camera.

Cotton also grows well in Mexico, and in some parts of the country has the valuable quality of continuing to bear good crops for several seasons in succession; while in the Southern States of America the soil must be strengthened with fertilizers and fresh seed sown every year. The cotton-plant is native to Mexico and yields very richly. Yet with all these great natural advantages for the cultivation of cotton, Mexico does not produce enough of the raw material to keep her own mills at work, but imports large quantities of cotton from the United States. A great cotton hacienda is strongly built, with walls like those of a fort; the tops of the walls are often studded thickly with broken glass of a jagged and deadly appearance; for further protection, companies of soldiers are kept within the establishment. A hacienda of this type, whether devoted to the manufacture of sugar or cotton, the raising of cattle, or mining of silver, is a complete little state, with every appliance for luxury and security. It contains within its walls hundreds of peons, soldiers, barracks, a chapel, houses for the laborers, apartments for the owner and his family, and every necessary of life for man and beast. The administrador, or general manager, is the father of the great family; he decides all disputes arising between the various members of it, and if he is only ordinarily just, never finds his authority disputed, but is looked up to with much respect and consulted by the peons in all family matters. A gentleman who was for some years administrador of an estate in the State of Coahuila told me that while occupying this position he conceived a



EL MEXICANO LABRADOR.

high opinion of the simplicity, honesty, and trustworthiness of the Mexican laborer.

The inhabitants of Mexico are Europeans, Creoles, and Mestizos. Creoles are children born in Mexico of European parentage; Mestizos are people of mixed origin. The Indian, or indigenous inhabitant, is of a brown color, is rather under the middle height, muscular, broad-chested, and, though his legs are not large, is capable of great endurance. The Indians retain the simple national dress they wore centuries ago and form the large class of peons, or laborers, on the great mining, coffee, and pulque haciendas. The man wears coarse cotton shirt and drawers and a piece of rough woollen cloth fastened round the hips with a belt and reaching to the knees; on his head is a high broad-brimmed straw hat, and on his feet, if he is shod at all, are leather sandals. For some unexplained reason the men almost always have one leg of their trousers rolled up to the knee. The women wear a chemise reaching to the knees and a piece of woollen stuff passing twice round the body, but not sewn together, girded round the waist by a colored sash. The hair is either rolled up on the head or worn in two long braids fastened together at the ends with a piece of ribbon. Earrings and bead necklaces are the usual ornaments.

In the *tierra caliente* the Indian's house is of cane or wood, thatched with straw or palm-leaves; on the *tierra fria*, or table-lands, where a more substantial dwelling is needed, it is of adobe, with a roof of beaten clay supported on beams. Inside the hut the sacred fire of the hearth is never allowed to die out. The domestic utensils are few and simple: a *metáte*, or stone for crushing the corn of which the tortillas are made, a flat pan for baking the tortillas, an earthenware brazier in which charcoal is used as fuel, and a few unglazed pots and dishes. In some parts of the country, however, beautiful pottery, highly glazed, of artistic color and graceful shape, is manufactured. Copies in miniature of the various domestic vessels of a native house can be obtained, and make pretty mementos of a visit to Mexico. Usually the walls of an Indian hut are decorated with a few rude, highly colored pictures of saints, and in a corner there is an image surrounded by cheap and tawdry ornaments. Though the property of the Catholic Church has been confiscated, yet the

PRINCIPAL CHURCH IN COATEPEC.

priests continue to exercise a strong influence over the natives, a large portion of whose scanty earnings they absorb.

The food of the Indians consists of fruit, vegetables, tortillas, frijoles or beans, and chilies. At a country *fonda*, or restaurant, one is offered *chile con carne*, or bits of meat rendered fiery hot with peppers, frijoles, the ever-recurring tortillas, either plain or with chili sauce, and to drink, the national liquor *pulque*. Pulque is produced by the fermentation of the *aguamiel*, or honey-sweet juice of the maguey, or century plant. It is of a milky-white color and looks very much like soapsuds. It is slightly intoxicating, as it contains about six per cent of alcohol. Its taste and smell must be tasted and smelt to be described. If one is very dusty and thirsty, closes one's eyes, and tries to deprive one's self of the sense of taste, it may be drunk, but hardly otherwise. *Mescal* is a spirit prepared from a particular species of maguey, and is much more highly intoxicating than pulque. To prepare it the leaves of the plant are crushed in a mill, and the juice thus expressed is distilled.

The fermented juice of the prickly pear is also drunk; and on the lands near the coast palm-wine is made. From the juice of the sugar-cane another intoxicant, called *aguardiente*, or fire-water, is obtained. However, this last, despite its ominous name, is no worse than the rum of the British sailor, the potato-brandy of Hamburg, or the arrack of the Chinaman.

MUNICIPAL BUILDING, COATEPEC.

As servants the Indians are indolent, but are always to be relied on; nor are they ever guilty of rudeness or impertinence. Of course, if a mistress starts out by thinking them devoid of all honesty and treating them as thieves and liars, she will probably be served as she expects to be served; but kindness and consideration, in the Republic of Mexico as elsewhere, reap their reward in faithful service. In hiring laborers

to work on a plantation or as domestic servants, you must advance them money and repay yourself by keeping back a part of their wages as they are earned. A servant always owes his master or mistress money when he leaves. When he wishes to leave he tells you so, and goes. This is usually done when the servant has a little money in hand, and then he does nothing while the money lasts. The next employer assumes the debt of the servant to his former master. There is no imprisonment for debt: a laborer cannot be forced to work until he has earned enough to wipe off a debt; and at death all obligation ceases; being purely personal, it does not descend to heirs. Wages are low, about two reales a day for an ordinary laborer; but mechanics and artisans are, of course, more highly paid. Our hostess in Coatepec told me that when she and her husband first came to Mexico she had to do almost all the work of the household herself; but she took great pains in teaching her servants, and now she has an excellent cook, a neat maid, and a boy, who carry on all the domestic work with a little supervision from their kind mistress. When additional help is wanted in the house, the cook's mother is near at hand, ready to help. The cooking is done at a native range, built of brick, and using charcoal as fuel. The servants make for their own use or have bought for them tortillas at a price, if I remember correctly, of three cents for fourteen.

The tortilla is the staff of life to the native, and the poor women seem to be working night and day at the grinding of the corn with which it is made. The corn is softened in lime or potash water, and is then crushed to a fine paste with a stone rolling-pin upon a little sloping three-legged stone table. Some of the paste is patted and flattened between the palms of the hands into a thin cake, which is baked on a flat stone or on a thin iron plate over a quick fire. Often the tortilla is mixed with bits of meat or with chopped peppers and fried in grease. Tortillas and frijoles, eaten with red peppers, are the chief articles of food of the poor of Mexico.

A MEXICAN VILLAGE MARKET.

RURAL GUARDS.

The natives are clean in their personal habits, being fond of bathing. Rude steam-baths are produced by pouring water on heated stones. They also keep their clothes very white and clean. When not grinding corn a native woman seems always to be washing clothes. At Coatepec I was fond of going down to a clear, brawling stream which flowed through the village and watching the women, with skirts tucked up to their knees, standing in the running water washing clothes, or sometimes their own long hair, a process in which they are very liberal of soap. Often both banks of a stream are lined with women washing clothes upon flat stones at the edge of the water. At Coatepec my attention was especially attracted by a pretty fair-haired girl, who laughed very much when I wished to take her photograph. She was probably a bewitching maiden of Jalapa, where blue-eyed blond girls are not uncommon.

The Indians are strong in bearing burdens, and will carry loads weighing from fifty to a hundred pounds as many miles to market, from which they return with only a dollar or two. After selling their earthenware vessels, chickens, charcoal, or garden stuff, they usually visit a pulqueria, or drinking-shop, which absorbs most of their earnings, and of the remainder the village priest gets a large share. The pulquerias are adorned with gaudy wall-paintings, and bear such names as "The Devil," "The Black Cock," "The Elephant," "The Little Hell," and so on. Like the American saloon, the London gin-shop, and the Parisian cabaret, they are the resort of loafers and idlers, who consume immense quantities of pulque. The stronger drink, *mescal*, is the cause of much of the crime in Mexico, fatal quarrels frequently arising from over-indulgence.

I come now to the second division of the inhabitants of Mexico—the Creoles. They are of European parentage, born in Mexico, and are often very handsome. They are indolent, very fond of gambling and of the fair sex. The young Creole girls are very closely watched by their mothers, and flirtation is carried on

under considerable difficulties. Usually the women wear the mantilla, or lace shawl, especially when going to church, but when dressed in their best they wear the latest French fashions.

The Mestizos (feminine, Mestizas) spring from the union of the Spanish and Aztec races, the fathers being usually white and the mothers Indian. They have swarthy complexions and are the handsomest people in Mexico. They are of gentle manners, docile, clean in their habits, and perfectly honest. They are fond of pleasure, and still retain many of their ancient customs and dances and the style of dress which they wore before the conquest. When of good blood they are often clever, and make excellent lawyers, doctors, and soldiers. They are superb and showy horsemen, and their riding costume is handsome and appropriate. It consists of a plaited shirt, with trousers of white or colored drill, fastened round the waist by a colored silk sash. The broad, high felt hat has a silver cord round it, often a silver monogram on the sides, and silver embroidery on the brim. The saddle is embellished with carved leather and silver bosses; a silver-mounted sword, a revolver, and a carbine also forming part of the outfit. The peasant wears open trousers of leather ornamented with silver and split up the sides to show the white drawers underneath, and a serape, or blanket, of gay colors, with a slit in the centre for the head to pass through. The Mestizas wear loose embroidered chemises, woollen or calico skirts, and over the head and shoulders the fringed *reboso*, or shawl. They rarely wear stockings, though their shoes are often neat.

MEXICAN CHILDREN.

The Mestizos of the better class are disposed to adopt the usages in dress and social matters of the gay, refined, light-hearted Gaul, rather than those of the more phlegmatic races. Their manners are very agreeable, and their courtesy and readiness to place themselves and their property at your disposal, if not to be taken *au pied de la lettre*, is at any rate charming.

To return to Coatepec. Overlooking the village is a hill called the Cerro de Coatepec. Up this we scrambled one damp afternoon through bushes and undergrowth, and obtained from its top a capital bird's-eye view of the little town, only one or two private buildings of which exceed a single story. We noticed the bull-ring, the low red-tiled roofs, and, rising high over all, the three churches with their domes and towers; also a curious hill of the shape of a truncated cone. Had the day been clearer, we should have seen the peak of Orizaba and the Cofre de Perote.

On any village road in Mexico one may see from time to time a string of bullock-carts, each in charge of a driver who holds in his hand the ox-goad so familiar to students of the Old Testament and to the readers of books of travel in the Holy Land. Indeed, one is often reminded in Mexico of the primitive usages of

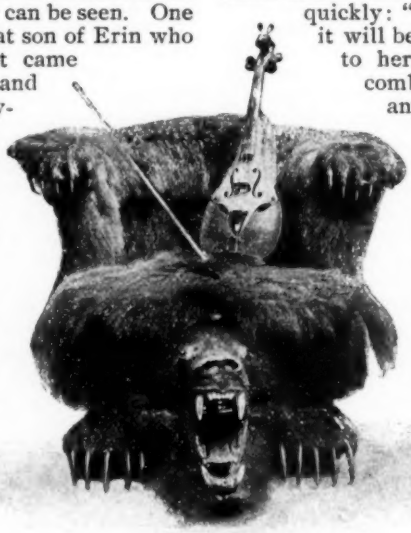
Palestine and the East. In both there is the same tenacious clinging to old-fashioned and apparently inefficient implements, and the same mistrust of new-fangled contrivances which their forefathers knew not. And in common fairness to primitive peoples it must be considered that highly ingenious and complicated pieces of machinery are not suited for use in a country where there are no skilled mechanics. If the complex machine gets out of order, who is to repair it? If one of the screws or springs is missing, how is it to be supplied? Further, where the labor of men and women is exceedingly cheap, much can be done by hand which in countries where labor is costly must be done by machines. For my part, I am by no means devoured with anxiety to see old countries invaded by steam-ploughs and patent harrows; there is more charm to me in the old methods. Beautiful handiwork is becoming a thing of the past, and the craftsman of earlier days, who was really an artist in clay, wood, or metal, has well-nigh disappeared, and instead of him we have machines (of wonderful ingenuity, it may be granted) which turn out thousands of articles precisely alike, and which dull the ears, blear the eyes, and deaden the souls of all who are concerned with their working.

Who would compare the spiritual value of life in a modern manufacturing town with existence in Florence or Rome in their best days? Does the thick white iron-china plate of a cheap city restaurant bear comparison with the commonest Mexican pulque-jug? Is cocoanut matting any improvement on hand-made petate? Does a machine-made straw hat, even with a buzz-saw edge, mark any distinct advance upon the peon's headgear? Is not a modern railway station or ferry depot an object of despicable meanness and ugliness? and what lessons does it teach other than those of a grovelling utilitarianism? If it pleases the traveller in Mexico to go back in imagination to Palestine in the days of Christ, why deprive him of his simple, harmless pleasure by noisy declamation about the wonders of steam, the telephone, and the telegraph? Let us rather thank God that the world has some regions left as yet unpenetrated by the modern spirit of unrest, where the heart, tired and chafed by the self-laudation of the nineteenth century, may refresh itself by contemplation of the simplicities of a life which hears the din of the great world, with its marvels of steam and electricity, only as the roar of a distant sea, whose ceaselessly plashing waves serve not to disturb, but to accentuate its calmness and repose.

CALIFORNIA AT THE WORLD'S FAIR.

BY CHARLES EDWIN MARKHAM.

THE WHITE CITY is one of the things that come up to the brag, "It is immense:" there is so much to see that nothing can be seen. One is reminded of that son of Erin who went hunting, but came back disgruntled and empty-handed, saying, "I give it up: every time I aimed at a duck another got in the way." There is food in the Fair for the critic and the cynic, but, withal, there is nothing of the kind in recorded history so vast, varied, and impressive.



BEAR CHAIR—HUMBOLDT EXHIBIT.

California's place in this great show is distinctly strong and dignified. She attracts the eyes of the world. There is an air of vastness and abundance about her exhibit. The Californian commissioners did wisely in making a separate State exhibit, in addition to her display in the general departments. In no other way could California have impressed her dignity and importance upon the world. As it is, she makes a profound impression; she stands out a distinct and significant figure—an empire in herself. Moreover, I feel that this gathering of the peoples will help on the growth of the fraternal feeling—help to wipe out our petty jealousies, our little spites, our absurd provincialism.

Mr. Opie Reed is a prominent figure in literary Chicago. I asked him the usual question, "What do you think of our exhibit?" He answered quickly: "California's exhibit will be worth $20,000,000 to her. It surpasses the combined displays of any other ten States. She is beyond rivalry. Washington is the only State that approaches her. She seems to unite in herself Europe, Asia, and Africa. Even the building is a marvel. To speak of the architects of that structure as 'woolly Westerners' is to show a gross ignorance of the meaning of words. Judged by her display, California is the foremost State in the Union. It will be worth to her a thousand articles—worth indeed all that you could print. The many-volumed Bancroft could not, in a century, produce the effect of this demonstration. It will do more than all your books and papers to remove erroneous impressions. California has a great future. In time people will pour out of the East and the Northwest upon the Pacific slope. A nature-force and a human-force will drive them to you. The people of the East will flee before the snows of the Atlantic seaboard: while the Swedes and Poles, crowding into the Northwest, will gradually force

THE DATE-PALM IN CALIFORNIA EXHIBIT.

the present inhabitants upon the coast."

Let us step into the old adobe Mission, so strangely picturesque, and see the exhibit that inspired this song of praise. We are at once in the heart of Southern California. On every hand are oranges and orange-boughs and the delicate fragrance of lemons. Here, upon the left, is the daring display of Kern. The county is symbolized by a bridge; the bases rest upon two globes, one the "Orient," the other the "Occident." In the centre of the bridge hangs a scale of prunes; the short arm represents the world, the long arm the county of Kern! So Kern is the macrocosm, is it? Draw your own conclusions. But first inspect these heaps and pyramids of riches. Inspect the pilasters and panels of the arch. Here are oranges, lemons, peaches, apples, pears, nectarines, plums, cherries, olives; English walnuts, black walnuts, peanuts, pecans, pinones; wheat, barley, corn, onions, oats, broom-corn, ramie, cotton; gold, silver, lead, copper, gypsum, iron, sulphur, salt, nickel, kaolin, borax—but the list runs out to the crack of doom!

Los Angeles, San Diego, Orange, Ventura, Santa Barbara, San Bernardino, and the new county of Riverside, owing to the similarity of their products, are associated in a combined exhibit. As we pass Santa Barbara we hear a clack of tongues: "What holds the bottles up?" "Don't touch them or they'll fall!" Looking that way, we see two tons of bottled olive oil built high into a new Cleopatra's Needle. The frame of steel supporting it is hidden. This Needle points to the fact that California is a rival of the oil-producing regions of the Mediterranean. Near by, another group is silently looking at pictures of the "Flower Festival" held annually at Santa Barbara. I also look, and I am again in the southwest land,

HUMBOLDT COUNTY EXHIBIT.

"Where tides of grass break into foam of flowers,
And where the wind's feet shine along the sea."

Another turn and we stand before the Bean Pagoda of Ventura! But how can we talk of beans, with the scent of the wild-rose in our nostrils and the noise of breaking billows in our ears? Let us pass on to the mulberry-trees of San Diego and Los Angeles. Here we find silk-culture in all its stages from the egg of the worm to the finest of colored sewing-silk. Here, too, are jellies and grains in heaps. We taste the raisins of San Diego and find them sweeter than the raisins of Malaga. Now we come to the big vegetables of Orange. You, comrade, sit there on that mammoth beet, and I will get along on this big squash. If you wish to move the beet, call two helpers, for it weighs one hundred and fifty pounds. What slender trees are these to our left? They are not trees: they are twenty-foot corn-stalks from the valleys of Orange. Yonder is the fine citrus display of San Bernardino — her grains, her honey. We cannot see from here the case containing specimens of the gold and silver hidden in her mountains. A little farther on is Riverside. In spite of her youth, she attracts almost as much attention as any country in the southern sisterhood. Here, to the right, is Los Angeles with her immense globe of oranges and her tower of English walnuts. Yonder is her "Palace of Plenty," a large structure in the shape of a Greek cross. It contains the products of the southern group; and it is claimed that among these products will be found all the fruits and grains of the Union. Those nodding plumes yonder are feathers from the ostrich-farms. Elsewhere Los Angeles has her mighty Liberty Bell, made of oranges and modelled after the old cracked bell of '76. Later on we will look at the work of the women of the south; nor can we now stop to look at the clumps of shrubs and ornamental trees. We must hasten on to Central California, to the northern citrus belt. Perhaps we can climb north on this castor-bean stalk. It will hold us up, for it is fourteen inches in diameter and is the famous stalk that Jack the Giant-Killer climbed in our youth. On our way we pass frames of honey in the honey-comb, and suddenly my heart goes back to the woods of Ventura, to the glens of Santa Barbara. Buried twilights return—I see the flaring camp-fire and the bed upon the green boughs.

We are now on the border of Fresno, the region of the sun-dried raisin. Here is a pagoda of redwood, with rafters of fir and roof of barley and wheat and oats and corn and pampas plumes. Here are all the sun-dried fruits—raisins and the rest—the pride of Fresno. Look at the walls of the pagoda: the pale gold of the lemons and the blood-red of the wood make a delicate chord of color.

We are bound for Santa Clara, but on the way let us step over to the Pampas Palace, examine the plume-built walls, the pictures, the relics. Close at hand is the great central palm-tree, towering forty feet into the air and throwing out of its top its green, enormous leaves. A daily bulletin is fastened to its trunk, giving the comparative temperature of Chicago and Coronado Beach. On July 13th the noon temperature of Chicago was 95° and that of Coronado 70°. This old tree has come two thousand miles to tell its story of sunshine and soft air.

What black knight is this on high, clad in the sixteenth century, dashing forward, sword in hand, "pointing with pride" toward a banner inscribed with the bold device: "Santa Clara challenges the world in the production of dried fruit!" It is the famous Knight-errant of Prunes (mem., Santa Clara in 1891 produced 20,000,000 pounds of prunes—the rest of the world 9,000,000). Let us turn a moment, in this time of war, to listen

to the healing music of the redwood piano of Santa Clara. How exquisite the grain of the wood—how perfect the polish! Now we examine cinnabar from the mines of New Almaden; magnesite, or fuller's-earth, that gives smooth finish and weight to paper; Angora fleeces, silky and fine, we are told, as the wool of Ancyra. We are urged to taste the delicious cherries and to sip a new beverage, an unfermented grape-juice that holds the flavor of the grape. Now we pass an immense pyramid of fruit—fruit seemingly from all lands. Here is a symphony of color—reds and yellows and whites and delicate greens. We must spend a moment over the pressed wild-flowers. They are mounted on cardboard and covered with celluloid. This new process protects from dust and prevents the crumbling of leaves and petals. Another moment must go to the transparent views from the Lick Observatory. Nor must we forget the Eschscholtzia Club of San José: it sends a case of hand-painted china—very attractive work. (But, in the name of Apollo and the Muses, I call down a purifying evil upon this club for adopting that atrocious name. What is the matter with California Poppy Club?)

DESIGN MADE FROM PRODUCTS OF BUTTE COUNTY.

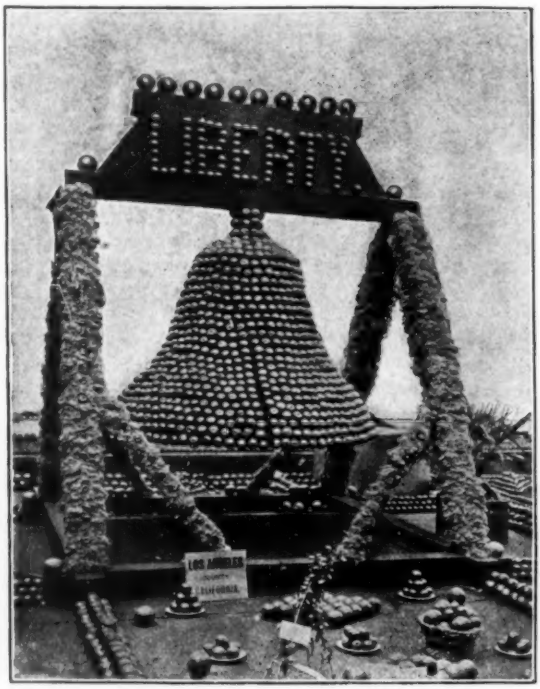
Moving on we pass Rupert Schmidt's famed figure of California. Now we are at Humboldt. As we enter, a grizzly, coming out of his cave, growls across our path. One thinks himself in the midst of a museum. Here are trophies and relics and curios; here are woods and fruits and grains, and Mrs. Herrick knows the story of them all. Tell us, good woman, what are these? and these?

I note some fragments of her long chronicle:

"Humboldt is the banner redwood county. Her redwood alone is worth one and a half billions, and her fine showing of the burl, curly, and straight-grain, plain and polished, has made the woodsmen of the world say it is the wood of the future, and that oak has had its day. The capability of this wood to take a high polish shows that it is far ahead of all foreign woods. You can see plaques, vases, urns, and curios, all polished like glass; canes made of bark and burl; also a vase turned from redwood bark that equals ebony. Humboldt has laurel of a width and length to utterly paralyze Eastern people. She shows yew-logs two feet in diameter, equal to rosewood, only of a deeper, richer red, hard as mahogany and capable of a high polish. We show Douglas spruce from which our finest ships are built and our tapering masts are made. And they are of such strength that even if old Boreas bends them when he sends his mighty breath roaring over old Ocean, they rise gracefully again and bear our products all over the world. . . . For minerals there is gold, silver, petroleum, coal, and iron. . . . Humboldt's future is assured. And they haven't a Chinaman in the county. . . . This famous mule's-head violin was made by the old hunter and trapper, Seth Kinman. And he told the story of it, caressing it all the time: 'I crossed the plains in '46, and me, the mule, and my old violin was true compan-

SANTA CLARA COUNTY EXHIBIT.

ions; sometimes not seeing a human face for a year. And when I'd get the old fiddle out and commence to play, that old mule would stick up his ears, leave his feed, and putting his head in the door of the tent or cabin, would wag his ears as long as I played, never leaving to feed. And I used to wonder if he wasn't musical. In '51 I rode him, a pioneer, into Humboldt; and when he died of old age I cut down a tree, split out boards, and made the violin out of the skull, in memory of the hardships we endured together.' Both are dead now, man and mule, and the old mule's-head fiddle is wanted for the musical conservatory of Berlin, but I have refused three hundred dollars for it, thinking such things should stay in America. This bear-skin chair was also made by Seth Kinman for Dom Pedro, and all the preliminaries made for presentation, when he overheard Dom Pedro say something detrimental to the American Government. He returned to the hotel, packed the chair, and returned home, and Dom Pedro was out a chair."



THE LIBERTY BELL OF ORANGES—LOS ANGELES COUNTY.

There, in the northeast corner of the building, is the Grain Palace of Butte, a structure double-walled with glass and filled in with a hundred and eighty-four varieties of grain. Curious are the pictures that one finds inside. They are made of grains and grasses and are the work of a skilful Spanish artist. An odd idea, that Butte display.

Shasta is proud of her fruits, minerals, and woods. She has no fruit in jars: it is all fresh and renewed from day to day. Tehama is the yoke-fellow of Shasta, and glories in her wealth of oranges and olives. She has tons of toothsome nuts from the almond orchards. By the way, I've been a spy upon that tree, and I find it is

"The first to brag with bloom, the last to bear."

We now seem to be entering a temple—it is the county of Sacramento. Here are grains and fruits without end. So fine and perfect are the grapes and peaches (the bloom is yet upon them) that people from benighted lands insist that the fruit is made of wax.

We walk through the pavilions of Alameda; we glance at her fruits and grains, but we weary of these riches —peaches white and red, pillars of

fruit, sugar in crystalline cubes, preserves in globes and Egyptian jars, brown wheat and white barley, tea-plants and tall corn, grapes from rolling hills, oranges from sheltered canyons. There is a moment left to glance at the relief map of the county. It strikes the imagination. You will enjoy, also, the relief maps of California and of San Francisco.

We are now in the southern wing of the building, by the bronze statue of Marshall, the discoverer of our gold. He stands in the centre of the mining display of the State. Here is free gold from the Delhi; gold in white quartz from Siskiyou; crystals of quartz and leaf gold from Plumas; big nuggets from Nevada; diamonds found in the gold-dust of old river-beds; wire-gold from Green Mountain; marbles from the quarries of Inyo; serpentine from Amador; rubellite (red tourmaline) from San Diego; aluminium from San Bernardino; asphaltum and petroleum from Kern and Ventura; softly colored onyx from San Luis Obispo. Look into these slabs of polished onyx: there are clouds there that stir not and mountain ranges tnat never heard the noise of cow-bells.

Now we go to the gallery above. Here is the work of the schools and the colleges. Berkeley and Palo Alto show photographs of their universities. Here is some crayon work, figures from life, from the Mark Hopkins Institute of Art. These studies are perhaps the best work in this department. Mills College shows views of her buildings and grounds. The work of the Cogswell Polytechnic compares favorably with anything in the Department of Liberal Arts. A fine showing of manual-training work comes from the San José Normal School. The manager of the department, Miss Katherine M. Casey, goes with us. "Quote me as saying," she says, "that the Oakland exhibit is more complete and satisfactory than any other public-school exhibit. Also that the work of the little school at Temescal is my pet display." Santa Clara, San Diego, Los Angeles, Alameda, and Humboldt counties make excellent showings. There is no

MULE-HEAD VIOLIN AND WHALE-BONE SEAT—HUMBOLDT COUNTY.

time for the pictorial exhibit of the churches; for the good work of the Blind Asylum and the School for the Feeble-Minded.

In the west wing is the historical exhibit, under the management of Mrs. Mary E. Hart, of Los Angeles. Here are things without end to delight the eye and warm the heart of the antiquary. Our three eras are represented—the aboriginal, the mission, and the pioneer. First we come to an Indian tepee or wigwam, made of untanned deer-skin, ornamented with figures of strange beings moving wildly in procession. Look at these old musical instruments, faded garments, odd implements for games, crude primitive machinery for preparing food. There is no time to examine these vases, these reliquaries. Now we come to a later day—to rude pictures painted by the early Indian converts, a series of pictures, fourteen in number, representing the fourteen "stations of the cross." These were recently discovered walled up in San Fernando Mission.

They look like old Egyptian paintings; some of the faces and figures seem identical with those upon the walls of the Egyptian temples in Cairo. Here, also, is a model of the San Luis Rey Mission; also, a curiously carved bench of Indian workmanship; also, an old worm-eaten door from Mission San Gabriel and a crumbling chime-wheel from San Juan Capistrano. An old clumsy plough used by the early Mexican inhabitants of the State takes us back to the crooked stick of the ancients. It was made from the bough of a tree, a branch of which forms the single handle of this strange implement. The place where the hand held is worn smooth. What a tragic interest hangs round this homely relic! Think of the men who have staggered behind it; and now it is the one witness of their anxious efforts, the one thing left on earth to tell the story of their days.

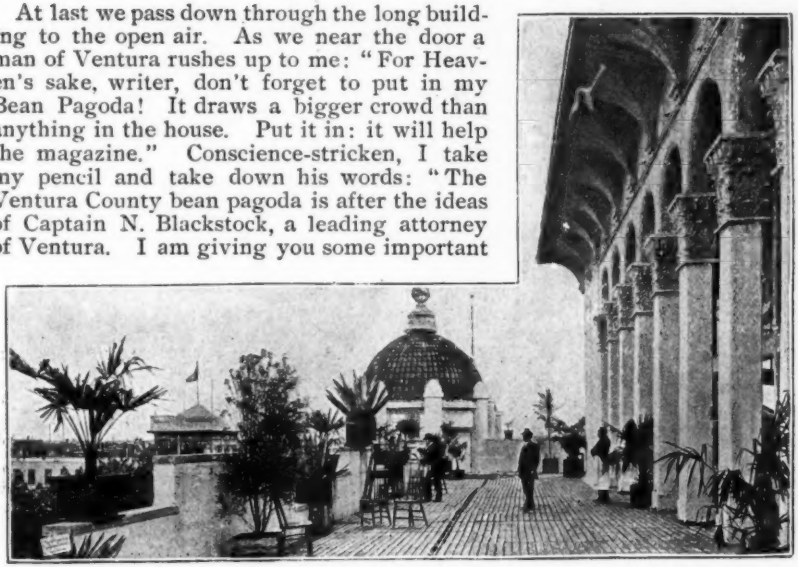
Of the Wells-Fargo display volumes could be written, for every corner and cranny of their room has some reminder of the life of desperate men. Everywhere are trophies that recall the masked men at the sharp turn in the road, the "hold-up," the mountain trail, the hunted tramp. Much, too, could be written of the Art Gallery. Among the important paintings are five Keiths and two Matthews. The gallery has many visitors. No other State has a separate collection of paintings.

Now the work of the women of California! They have a just pride in what they have done. Notice the grace and beauty of that circular colonnade below us. It was erected for San Mateo, but is a part of women's work. Also the Pampas Palace that we passed. Yonder, too, are a thousand dainty things from Southern California — silk embroideries, decorated china, Mexican drawn-work, oil-paintings, souvenirs. Also a display of wild-flowers painted on native woods, from Mendocino; carved easels from Alameda; sea-weed and shells from Monterey and Santa Cruz.

To the women we owe also the attractive and restful San Francisco room. It contains the exhibit of our literature and music. The former is in charge of the well-known writer, Mrs. Ella Sterling Cummins; the latter was arranged by Mrs. John Vance Cheney, the president of the Century Club. This room, designed by Mr. Edmund Russell, is made of fragrant redwood; a dull copper is the prevailing tone. On one hand are portraits of Emma Nevada, Sybil Sanderson, Karl Formes. In corners are panels hung with strange instruments of music—Chinese, Japanese, Indian, and Hawaiian. Literature is yonder on the west wall. There we can get a taste of literary California — Joaquin Miller, Ambrose Bierce, John Vance Cheney, Charles Warren Stoddard; Miss Ina Coolbrith, Mrs. Gertrude Atherton, and the rest. Fine fire-etchings of some of these are hung upon the walls.

Now we reach the Poppy and the Wild-Flower rooms. Mrs. E. O. Smith, president of the Board of Women Managers, is here to meet us. At the portal we pause to read Mrs. Wagner's poppy poem, worked in gold threads upon a white banner. The Poppy room was made in honor of the emblem flower of the State. The divans and the decorations are in white and yellow—white silk and cloth of gold—and the walls are hung with curtains of gold. On the ceiling is the figure of a girl, golden-haired and beautiful, throwing poppies. Behind her are two cupids sporting, and farther away are the outlines of palms and gum-trees in a rising rosy light. There is a golden twilight always in the room. Now push aside these portières, and we are in the Wild-Flower room. Here everything is more simple and severe in design. Long, delicate ferns hang over a pedestal of green and yellow marble. The walls are draped with folds of olive-green silk; and against these hang our wild-flowers in water-colors.

At last we pass down through the long building to the open air. As we near the door a man of Ventura rushes up to me: "For Heaven's sake, writer, don't forget to put in my Bean Pagoda! It draws a bigger crowd than anything in the house. Put it in: it will help the magazine." Conscience-stricken, I take my pencil and take down his words: "The Ventura County bean pagoda is after the ideas of Captain N. Blackstock, a leading attorney of Ventura. I am giving you some important



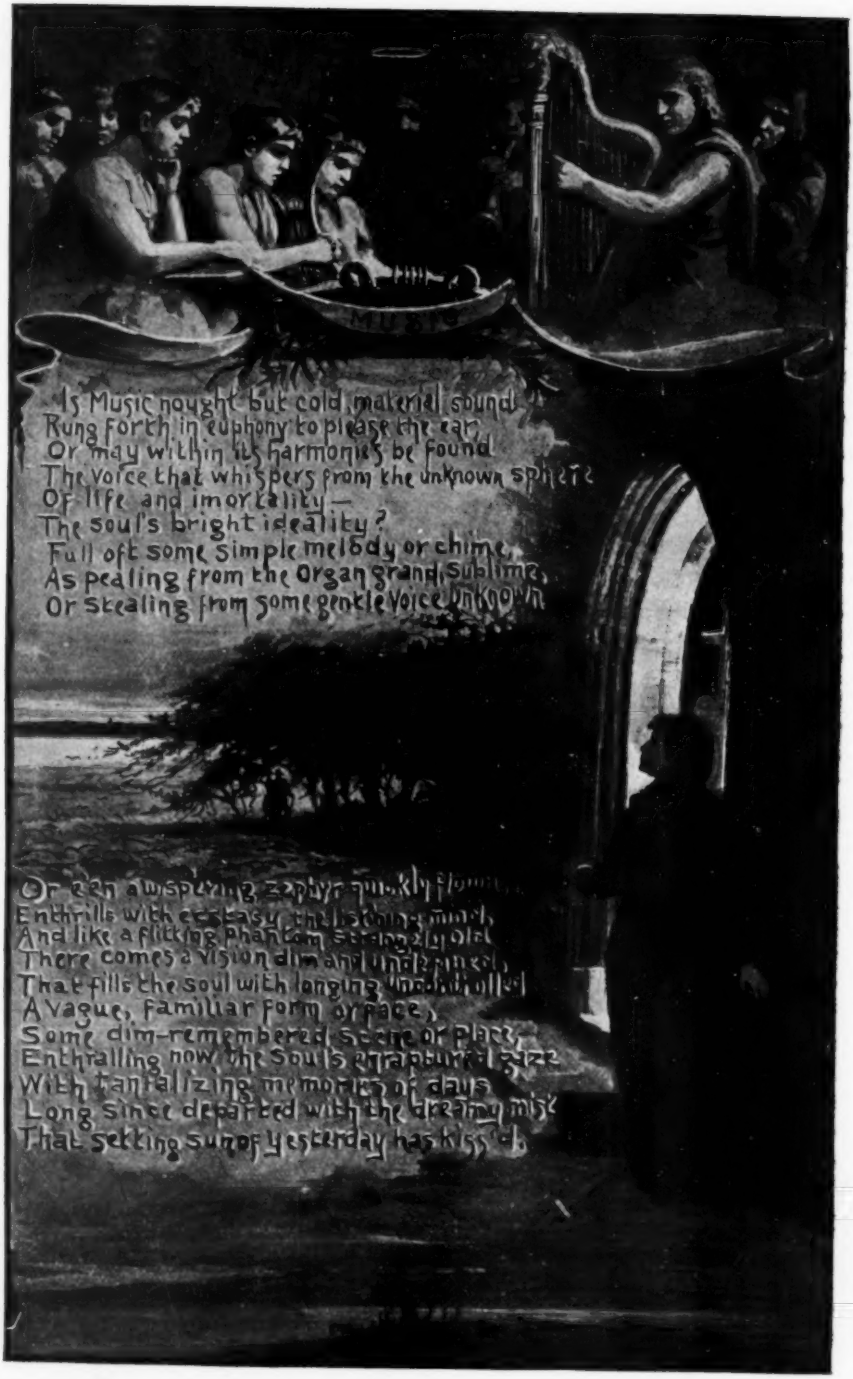
TOP OF CALIFORNIA BUILDING.

names. The architect was George C. Power, of Ventura. Captain W. H. A. Thompson, of West Saticoy, is manager of the exhibit, and F. A. Foster, of Ventura, arranged the beans. The size of the pagoda is twenty-three and a half feet, extreme height, and twelve feet from side to side, with an octagon base. It contains one ton of beans; has six hundred and fifteen apartments, faced with glass and filled with beans. On its top are beans growing in pots. All these beans are from Ventura County."

At the door I look back over it all. I see the figure of California, looking down upon us, silent and satisfied. Here are the products of the thrifty tillers of the earth. Let them take courage in their work, for, ages ago, Zoroaster left his blessing upon them. Open your Zend-Avesta and read:

> "Not for the righteous—
> Not for the thrifty tillers of the earth
> Shall there be destruction together
> With the wicked."

But there is a touch of pathos in the fact that this great structure, built with so much anxious thought, is only for a day. Yes, all this White City that has come so suddenly is to pass away as suddenly. It is only for a day: a little while and all these towers and domes, these white walls, these colonnades, these sculptures, these thronging forms, these voices, this music—all this vast fabric that touches the earth so lightly — will suddenly break and disappear.

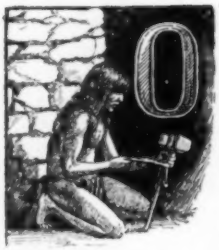

MUSIC
Is Music nought but cold material sound
Rung forth in euphony to please the ear,
Or may within its harmonies be found
The voice that whispers from the unknown sphere
Of life and immortality —
The soul's bright ideality?
Full oft some simple melody or chime,
As pealing from the Organ grand, Sublime,
Or stealing from some gentle voice unknown
Or e'en a whispering zephyr quickly flown
Enthrills with ecstasy the listening mind
And like a flitting Phantom strangely bold
There comes a vision dim and undefined
That fills the soul with longing undefined
A vague, familiar form or face,
Some dim-remembered Scene or Place,
Enthralling now, the Soul's entranced gaze
With tantalizing memories of days
Long since departed with the dreamy mist
That setting Sun of Yesterday has kissed.

Is it the Vision of these days returned
Or is it but the memory of a dream
Whose impression on the mind had been unlearned
Til brightened by the music's magic theme?
Or may it be transcendent memory
Of Preexistent life in faint rehearse,
As throbs the hidden chord of mystery
That binds the soul with all the universe
And pulses with the life divine
Beyond the Spirit's mortal shrine
Where'er the mystic melodies of earth
In tristful Symphony or mellow mirth
But touch in unison the vital note
Uniting distant worlds howe'er remote?
For oft the soul that ne'er before gave sign
Of life or love, but slumbered on unknown,
Awakes one day within the thrall divine
Of some electric, sympathetic tone,
That thrills the latent soul with life
To glow with wild, ecstatic strife,
As does the touch of nature's breath unfold
The hidden bud, though seeming dead and cold
And brings to light in mystery combined
A life and beauty none had e'er divined!

Clifford Howard

THE EARLY AMERICANS.

BY PROFESSOR GEORGE N. RICHARDSON.



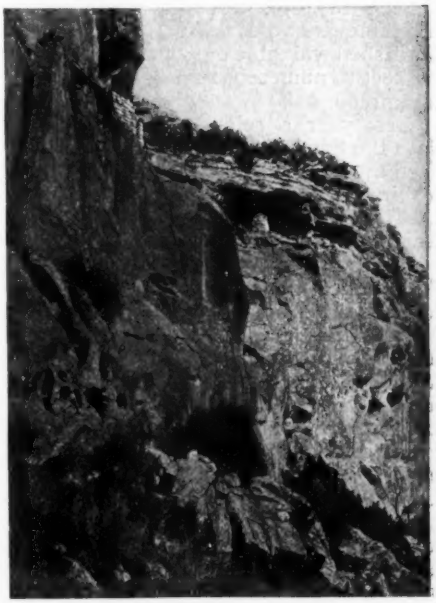
VER an immense region, including large portions of Colorado, New Mexico, Arizona, and Utah, are scattered countless ruins of edifices that were once the habitations of a by-gone people. Who these people were, whence they came, and what was the cause of their disappearance—or almost total disappearance, if the Zuñi and Moqui are remnants of them—the archæologist cannot inform us; but it is certain that the whole of the great territory which they occupied was once as densely populated as the most populous rural districts in the United States at the present time. There was no place on the wrinkled surface of the land that they did not inhabit; in deep canyons, fertile valleys, midway up the faces of frowning cliffs, on rolling mesas, and on the summits of almost inaccessible rocks they constructed their abodes.

That those who inhabited the valleys and the lowlands were a peaceful agricultural race there can be no doubt; but what manner of people were those who lived in the cave dwellings and built those impregnable fortresses, the cliff-houses? Who were the enemies that compelled them to find safety on inaccessible crags? Why should the quiet settlements on the banks of streams be left unmolested, while the cave-dwellers and builders of the cliff-houses were made subject to attack? Were the latter contemporaneous with the valley tribes? These are questions unanswered as yet by the ethnologist. There are, however, theorists who incline to the opinion that the teeming population which originally inhabited the mesas and valleys were driven to make their homes in the cliffs by the invasion of powerful tribes from the north, and that physical changes which occurred at a later epoch rendered the region uninhabitable, causing an exodus of both conquerors and conquered.

Coronado was the first explorer to enter the territory of the cliff-dwellers and verify the rumors that had reached the Spaniards of their exist-

CLIFF-DWELLING, MANCOS CANYON.

ence. That was in 1540, and in August of that year, in his report to the Viceroy of Mexico, he gave a description of the "Seven Cities of Cibola," the site of which has not been accurately determined. Hubert Howe Bancroft, in his "Native Races," is of the opinion that the evidence in favor of Old Zuñi being the ruins of Coronado's celebrated "Seven Cities" is conclusive. Gallatin, Squier, Whipple, Turner, Kern, and Simpson are of the same belief, but Bancroft supports his conclusion mainly on the statement made by Espejo, who visited the locality some years after Coronado's expedition, and who distinctly says that the place was called Zuñi by the natives and Cibola by the Spaniards. Another opinion is that the ruins of those ancient pueblos lie on the Chaco River, an affluent of the San Juan. These cliff-dwellings in time were lost sight of, and it was not until exploring expeditions sent by the United States into the region discovered ruins and archæological remains of importance that the interest of scientists was aroused.



A HIGH CLIFF-DWELLING.

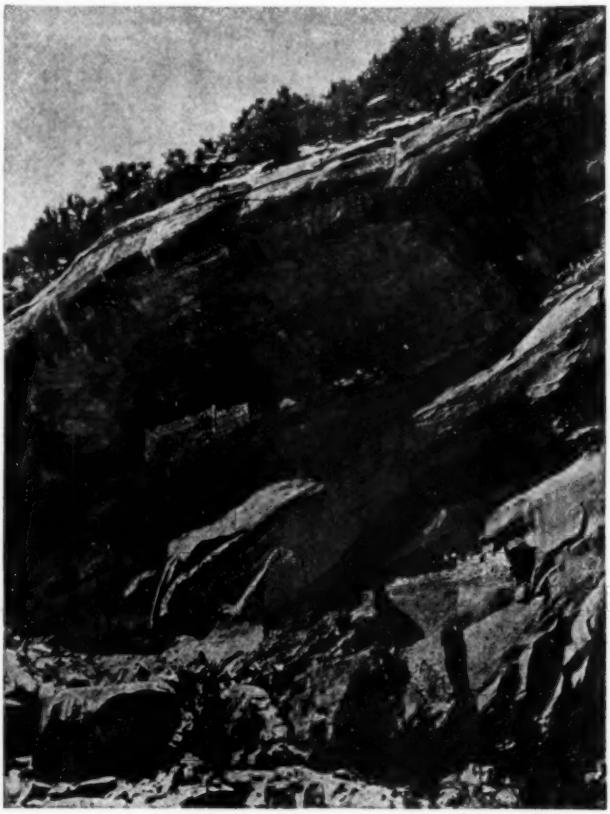
Various exploring parties visited the locality, but nothing of importance was gained until the Hayden survey

CLIFF-DWELLING IN MANCOS CANYON.

during 1874–76, when Mr. William H. Holmes and Mr. W. H. Jackson furnished valuable information with respect to numerous ruins which they examined.

Last year a scientific expedition into the San Juan district was organized by *The Illustrated American* Publishing Company of New York, under the auspices of the Smithsonian Museum of Washington, the American Museum of Natural History of New York, and the Peabody Museum of Boston. The members of the party were selected with care, and the results have been a grand addition to archæological knowledge, important discoveries of ruins and of relics that reveal the habits and customs, the industries and occupations of the ancient inhabitants, and the finding of new fields for future explorations.

The ground explored by the expedition covers the four corners where the States of Colorado and Arizona and the Territories of Utah and New Mexico join together. For several months canyon after canyon was visited, cliff after cliff was climbed at risk of life and limb, while ever and anon dangerous streams were descended and waterless deserts were crossed. The first ruins visited were those of the pueblos at Aztec, New Mexico. The party then proceeded northward to the valley of the Rio de la Plata, and during their future movements McElmo, Hovenweep, and Ruin Canyons were visited and examined, as also Butler's Wash, Comb Wash, Monarch Canyon, Allen Canyon, and other places. Everywhere ruins were found pointing to the fact that the ancient population of the region had been at one stage of its existence very great.



CLIFF-DWELLING, MANCOS CANYON.

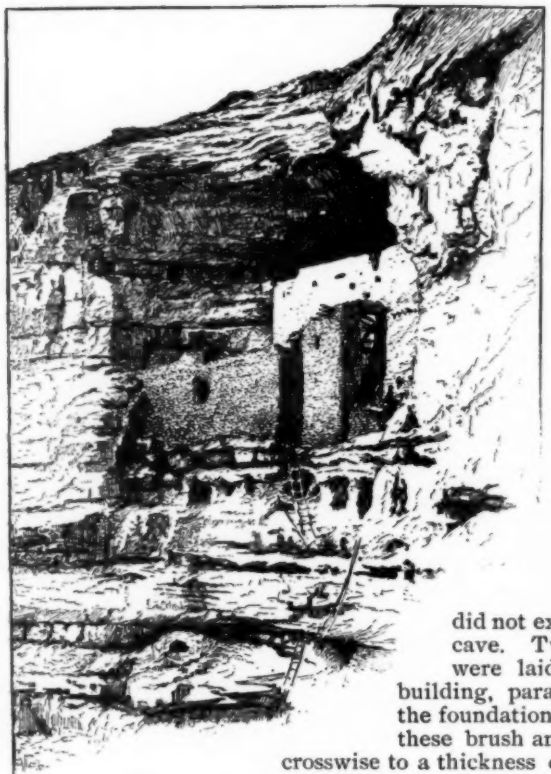
In most of these ruins were found fragments of pottery, and in some instances unbroken specimens were unearthed displaying decorations and designs that mutely spoke of the high

degree of skill and art to which the ancient potter had attained. The samples unearthed consisted principally of bowls, water-jugs, and jars of various forms, and earthen vessels of the shape of the modern frying-pan. Arrow-heads, flint knives, and stone axes were also found, and human skeletons, these latter being found in the burial-mounds on the mesas and in the valleys. Of the manner in which the cliff-dwellers disposed of their dead we shall speak later.

In the McElmo and Hovenweep Canyons were discovered numerous picture-writings, the most interesting of these being in Yellow Jacket Canyon, about one mile to the east of the junction of the Hovenweep and McElmo Creeks, where there "is a large cave-shelter with the remains of a tower on top of the boulder. One side of the rock was literally covered with picture-writings and signs. The human form, deer, goats, lizards, snakes, bears, turkeys, and many other birds and animals are plainly distinguishable, while intermingled with the figures are many hieroglyphics." The occurrence of the Swastika cross, however, was regarded as the most important discovery made in that group of pictographs. This cross is a Mexican and Central American symbol, and its presence at this distant point would seem to indicate that the inhabitants of the cliffs were conversant to some extent with the religious rites of the nations in the south. The same symbol has been found in the ruins of the Mancos Canyon.

In San Juan County, Utah, is the famous Ruin Canyon, with its circular, semi-circular, and square towers, and its ruins of great buildings. These remains the exploring party examined carefully, and several very curious facts presented themselves in connection with the existence of the ancient inhabitants, namely, that the ruins are a considerable distance from any other group; the soil of the canyon is not tillable; the buildings were constructed for defensive purposes, each one being a fortress in itself; and that there could be found no cemetery or burying-ground. How did these people live, when in Ruin Canyon there was no soil in which to raise a crop? The numerous picture-writings on the cliffs reveal the sources of subsistence. The figures of goats and sheep appear wherever these pictographs are seen, and we know that the cliff-dwellers reared these animals and were thus supplied with food, milk, and clothing.

The southeast corner of Utah is a desolate land, cut and slashed and torn in all directions by deep gorges and wild canyons, and abounding in precipitous cliffs pierced by great caves and caverns. In this uninviting region the ancient cave-dweller found refuge from his foes, and evidence of his former presence is everywhere visible. A number of these cave shelters and dwellings in Butler's Wash, Comb Wash, and Cottonwood Gulch were visited by the expedition, but the most picturesque group of ruins yet discovered by them was in a beautiful little box canyon running about half a mile into the rocky divide which separates Butler's Wash and Comb Wash. In it shady cottonwood trees, green shrubbery, and flowering plants greeted the toil-worn explorers and cool running water quenched their thirst. At the far end of this little paradise, in a desert wilderness, a large cavern is formed in the cliffs as they meet. The ruins in this cave, which is thirty-five feet high and over fifty-seven feet deep, with their curved fronts and numerous port-holes, give them the appearance of a modern fortress. The cave is one hundred feet above the floor of the canyon and can only be reached by using the ancient footholds cut in the steep surface of the sandstone ledge. Mr. Lewis W. Gunckel, geologist of the expedition, thus describes this interesting cave-dwelling:



CLIFF-DWELLING ON BEAVER CREEK.

"Judging from the large number of port-holes in these ruins, the structure was evidently intended for a fortification. In one room we counted twenty-five port-holes. From these the defenders could send their deadly arrows in every direction. The front walls of the most prominent rooms are all rounded, so that by means of the port-holes the whole canyon below could be commanded. The entire aspect of the cave is of defence and protection rather than comfort.

"The buildings in the north end of the cave give perfect illustrations as to the methods of roofing when the buildings did not extend up to the roof of the cave. Two heavy beams or rafters were laid across the top of the building, parallel with each other, as the foundation for the roof. Then over these brush and small sticks were laid crosswise to a thickness of three inches, and upon this was set a layer of adobe mud about three or four inches thick, neatly plastered down. The roofs in Monarch's Cave (thus named by the expedition) still show the finger-marks of the ancient builders. Some of these buildings are two stories in height, the upper story being in a good state of preservation, although the floors have fallen through. In one case, the entrance to the upper room is by a small door in the wall, which is reached by means of a cedar log laid across to the next dwelling. The log is a little lower than the sill of the door, and for convenience of entering a stone protrudes from the building, serving as a step from the log to the door above. It is truly a unique way of entering one's residence, and it is the only case which we have noticed."

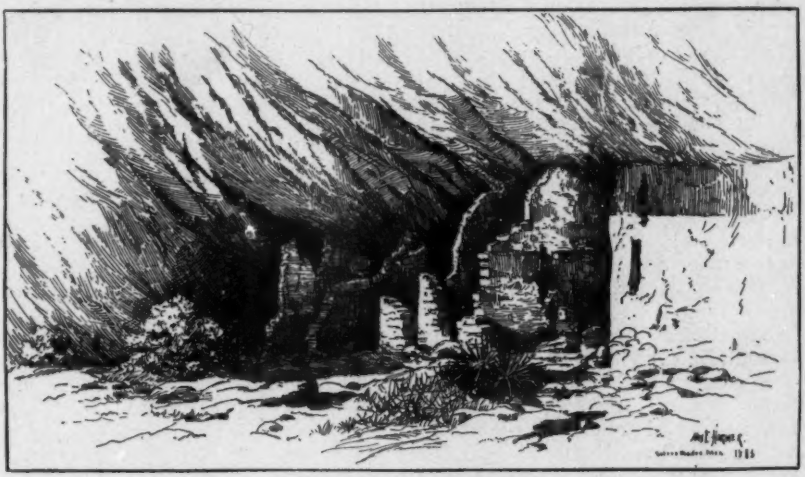
On the walls of the cave representations of the human hand were found in great numbers, colored red, white, and green. Rude picture-writings were also seen both inside the cave and along the sides of the cliff, while in some of the rooms neatly worked stone axes were found by digging, as well as arrow-heads, pieces of matting, string, corncobs, and sticks with balls of pitch on the end for torches.

The symbol of the hand is one of the most ancient known to archæologists, and is as widely spread as the symbols of the Swastika and the serpent; it appears in the walls of ancient temples and palaces of Assyria, it is

found in Yucatan and in the length and breadth of the Mississippi Valley. Civilized nations and barbaric races of the past used it, and it is still preserved in our legal documents in the words "witness our hand and seal." Though the origin of it is lost in the mists of the past, it was the most natural symbol for primitive man to make use of to represent possession, strength, and authority. The impressions on the walls and over the doors of the buildings in which the ancient cliff-dwellers lived were probably the marks of ownership used by successive possessors during many generations of a family; but the symbol was put to different uses by different peoples. With regard to its prevalence in the buildings and cave-shelters of the cliff-dwellers, an anonymous writer in the *Illustrated American* of August 13th, 1892, makes these remarks:

"The hand is, of all pictographs, the symbol of most frequent occurrence. It is cut into the rock or painted upon it in red, yellow, or black. Sometimes it stands alone over the entrance to a dwelling, and sometimes on the walls surrounded by numerous pictographs of animals and inanimate objects. In almost all cases they are located in such inaccessible places or are so indefinite that it is quite impossible to secure photographs.

"The rear walls of each of the fifteen chambers of the Casa del Echo



RUINS NEAR FORT WINGATE.

(*sic*) cavern are stamped with several hands of ordinary size. Not one of them is cut into the rock; in every case the owner or dweller seems to have dipped his hand into red paint, and then firmly pressed his palm and fingers against a smooth portion of the wall. Since it seems incredible that so light a paint could have lasted through the thousands of years, it is probable that the color was thickened by the laying on of more paint over the lines of the first made. It is observable that the right hand predominates, and by actual count we found the average to be an excess of over seventy per cent."

The Casa del Eco is a famous relic of the cliff-dwellers. It was discovered and named by the Hayden survey expedition, and both Mr. Holmes and Mr. Jackson have given descriptions of it. Mr. Jackson thus

writes of it: "The opening of the cave is almost perfectly circular, two hundred feet in diameter, divided equally between the two kinds of rocks (light-colored sandstone and a dark red variety), reaching, within a few feet, the top of the bluff above and the level of the valley below. It runs back in a semicircular sweep to a depth of one hundred feet; the top is a perfect half-dome, and the lower half only less so from the accumulation of *débris* and the thick, brushy foliage, the cool dampness of its shadowed interior, where the sun never touches, favoring a luxurious growth."

After describing the buildings that extend along this semicircular floor he remarks: "The whole appearance of the place and its surroundings indicates that the family or little community who inhabited it were in good circumstances and the lords of the surrounding country. Looking out from one of their houses, with a great dome of rock overhead, that echoed and re-echoed every word uttered with marvellous distinctness, and all about a steep descent of one hundred feet down to the broad fertile valleys, covered with waving fields of maize, the scattered groves of the majestic cottonwood, and the meanderings of the Rio San Juan, these old people, whom even the imagination can hardly clothe with reality, must have felt a sense of security that even the incursions of their barbarous foes could hardly have disturbed."

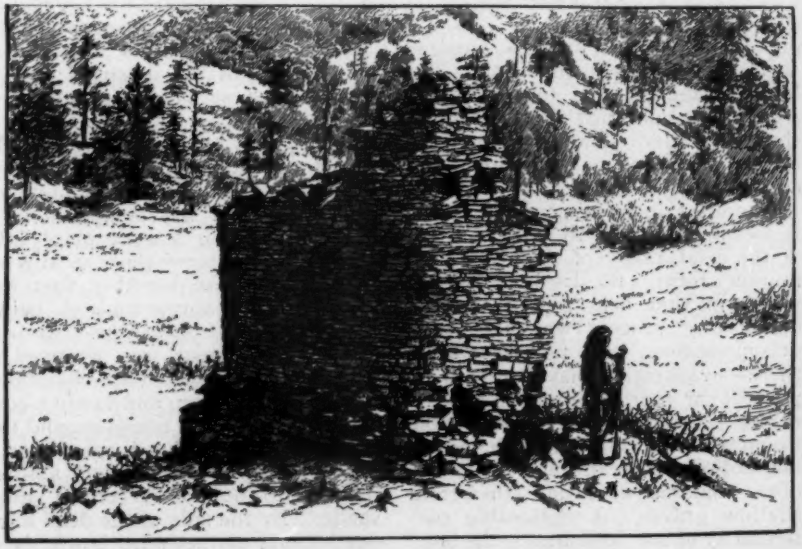
A favorite resort of the cliff-inhabiting people was the canyon of the Rio Mancos, and traces of their industry may be found everywhere, on river bottom, cliff, and table-land. A special feature of the relics in this canyon are the ruins of round towers, which occupied positions of different elevations, some being on high promontories, others on the edges of cliffs and erected immediately above cave-dwellings, and others again quite low, within twenty or thirty feet of the river-bed. Some of these towers were surrounded by a high wall, the space being divided into compartments, and near the mouth of the Rio Mancos occurs a double tower, the smaller one having a diameter of fifteen feet, that of the larger one tangent to it being forty feet. They are built on the edge of the cliff, the smaller and outside one having been the tower proper. About midway up the canyon on a narrow strip of alluvial bottom is situated a large circular ruin which has been named the great tower of Mancos Canyon. It represents the class of towers that were protected by an outer wall. This ruin is in an advanced stage of decay, attesting to its great antiquity. The inner wall, however, can be traced throughout the entire circle, being in places six feet and eight feet high. A portion of the outer wall is still standing and is twelve feet in height. The diameter of the outer wall is forty-three feet and that of the inner twenty-five feet. The space between the walls was divided into compartments or cells, ten in number according to geometrical calculations made by Mr. Holmes based upon four of the partition walls which still remain in a fair state of preservation. Each compartment communicated with the central inclosure by means of an entrance or doorway six feet above the ground, and measuring two feet in width and three feet in height. "It may be fairly presumed," says Mr. Holmes, "that the outer wall had no doorway or windows within reach of the ground, and that entrance was obtained, by means of ladders, through high windows or by way of the roof."

Valuable as were the results of the expedition sent out by the *Illustrated American* Publishing Company with respect to discoveries made and the interest that will be aroused in these ancient remains, another most important matter was accomplished, and that was the securing for the Smithsonian Institution the great collection of cliff-dwellers' relics that was in

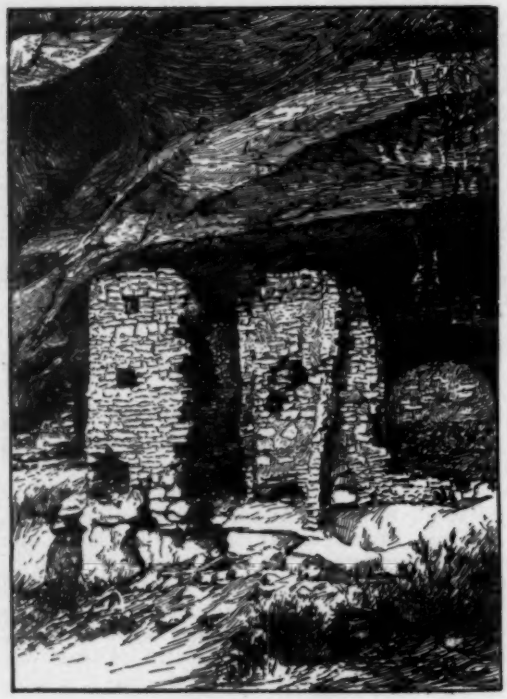
the possession of Mr. Charles McLoyd, of Durango, Colorado. This collection consists of 21,000 different specimens and objects accumulated during a period of many years and under circumstances entailing toil and danger. In itself it contains the history of those ancient tribes, and both ethnologist and archæologist will have ample means of pursuing their favorite studies to enable them to penetrate the mysteries of the past and read the records of ancient days. There are skulls and mummies and skeletons to enable the craniologist and scientist to tell us about the mental and physical development of the cliff-dweller; there are his implements of war and industry; pottery and household utensils; there are specimens of his food, his pipe, his dress, and his children's playthings—silent recorders of his pursuits and industries, of the conditions of his life and his domestic habits. Surely, with such store of relics the scientists will be able to throw some light on the obscurity which conceals from us alike his origin and the cause of his extinction.

The relics found in these strange ruins are for the most part unearthed from a covering of fine dust and rubbish, the accumulation of centuries, work in which is very trying. Indeed, the explorer is frequently compelled to tie a damp sponge over his mouth and nostrils while engaged in excavating.

At the end of May last a member of the "H. J. Smith Exploring Company" passed through San Francisco *en route* to Chicago. He was conveying a consignment of cliff-dwellers' relics to the World's Fair. The labors of the exploring party to which he was attached were best rewarded in the "Cliff Palace" city, in Navajo Canyon, about six hundred and fifty miles southwest of Denver, the population of which, judging from the extent of the ruins, was estimated to have been not less than one hundred and fifty in number. Situated one hundred and fifty feet below the edge of the bluff, this cliff village—for such it may be called—was five hun-



ANCIENT TOWER NEAR FORT WINGATE.



RUINS NEAR FORT WINGATE.

dred feet in length and one hundred and twenty-five feet in depth. The houses ranged from four to seven stories in height, and the ground-floors show one hundred and twenty-seven rooms. The bed of the canyon lies a thousand feet below.

The most interesting relics found in this human eyrie were the remains of the dead, many of them being in mummy form. So dry is the atmosphere in that arid region that no embalming process was necessary; decomposition has no occupation there—evaporation has usurped its power over mortal remains, and the corpse shrivels and dries. The mummies were found in little closets and hollow places in the walls, while other remains were unearthed from shallow graves. A noticeable particularity of the mummies is the hair, which is fine and soft, varying in color from blond to brown, a convincing proof that the cliff-dwellers were not of the Indian race. A very perfect specimen was found walled up in a corner of one of the ruins. It is the body of a tall woman, about five feet ten inches in stature, and from the contorted attitude, the doubled-up form, and the protruding tongue there is some reason to suppose that she died in agony. The fact that by her side was a little heap of tiny bones suggests the conjecture that her infant perished with her, and that they had been immured alive, the punishment perhaps of a priestess' broken vows or a wife's infidelity.

In the disposal of their dead, the cliff-dwellers employed several methods and displayed considerable care. They had several different kinds of sepulchre. One was a shallow grave; another was a tomb erected above ground; in some instances, cells fashioned in hollow walls were made depositories of the departed; while still another method was to appropriate to the purpose an entire room the entrance to which was hermetically sealed with stone and adobe mortar.

The corpse was dressed in a feather garment which was composed of a texture of some fibrous plant into which were interwoven the tips of feathers so close together that the robe had the appearance of being made entirely of bird-skins. Around this undergarment was wrapped a piece of matting which was enveloped in a layer of cotton, and lastly a covering of reeds was bound around the corpse. Over the head was placed a kind of wicker basket, very similar in shape to the modern conical lamp-shade. By the side of the dead have been found earthenware bowls, jars,

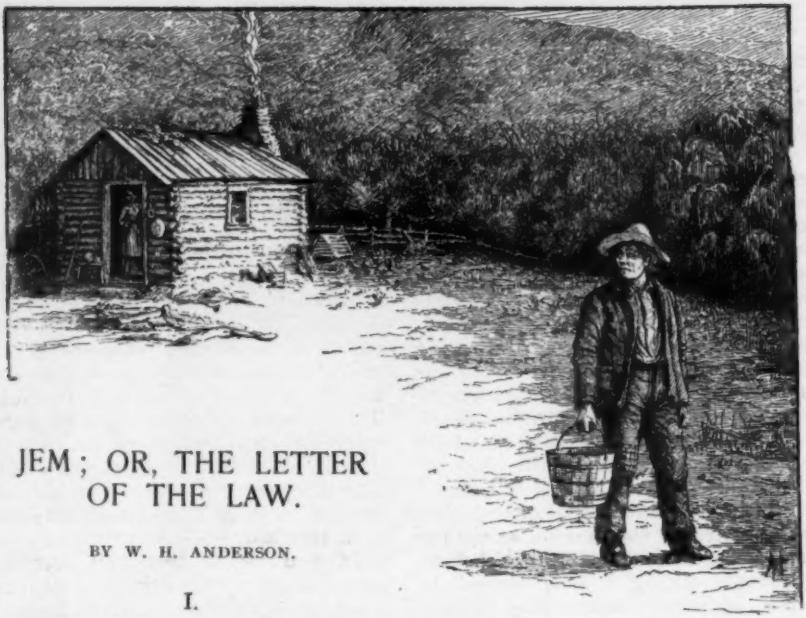
culinary utensils, also flint knives and arrow-heads and other objects, presumedly those used by the deceased when alive.

Hitherto all attempts to assign a time when the cliff-dwellings were abandoned have been mere conjectures. Some theorists incline to the opinion that they were inhabited after the conquest of Mexico by Cortes; others that they were ruins many centuries before the discovery of America, while the anonymous writer quoted above, and who was apparently a member of the expedition sent out by the *Illustrated American* Publishing Company, is bold enough to carry back the date of abandonment "thousands of years." That the ruins are not all of the same age is certain; and it is not unreasonable to conclude that the cliff-dwellers survived during a long period of time, various communities voluntarily abandoning their old homes for more favorable positions long before the final disappearance of the race.

Now that so many of these ancient ruins are being explored, the archæologist by comparative examinations into improvements in architecture, by a careful consideration of the conditions and progress of decay, and by studying the relics of earthenware and the implements that are continually being found, will, it is hoped, be able approximately to assign different periods of antiquity to different ruins. In spite of the arid climate and other favoring circumstances militating against decay, it is difficult to believe that certain relics, such as wood-work, matting, etc., have defied the destructive action of time of any great length. It is true that the cerements that infold Egyptian mummies are thousands of years old, but it must be remembered they were smeared with preservative unguents, that many of their lifeless wearers were inclosed in air-tight sarcophagi, and that none of them were exposed to weathering influences.

What an extraordinary life those ancient peoples led! What curious households they presented, living in homes perched in holes and niches and wide-yawning caverns in the cliffs at heights varying from one hundred to two thousand feet above the bottoms of the canyons! With muscular limbs and steady nerves the cliff-dweller day by day would sally from his doorway and descend the bald rock a thousand feet without a tremor—with no more feeling of trepidation than had the eagle which soared above him. Accustomed from infancy to gaze from dizzy heights, he skirted the precipice's edge in all safety and looked unmoved into the abyss below. Evening found him at home again with his children around him, perhaps smoking his pipe after a supper of roasted corn and flesh of turkey.* And the babies, like eaglets in their eyries! Imagine mothers descending those steeps with their infants on their backs and returning with vessels of water or bundles of fire-fuel on their heads! No wonder that the children learned to gaze unawed into fearsome depths, and, where facilities offered, played hide-and-seek and tag-last among the rocks, as soon as they had discarded their child-rattles and other playthings. They were safer and more free from danger of accident than are the school-children of San Francisco and Oakland, where the trolley and the cable-car, the railway and the furiously driven delivery-wagon maim and kill.

* There is every reason to suppose that the turkey was domesticated by the cliff-dwellers, and in some localities the meat of that bird seems to have been the only flesh food; in others the goat, sheep, and probably deer furnished food.



"YOU JEM! WHUR BE YOU-UN ER GOIN' TER?"

JEM; OR, THE LETTER OF THE LAW.

BY W. H. ANDERSON.

I.

IT was one of those crisp, clear mornings in early autumn when nature's wizard is busy tingeing hill and valley with his magic dyes. Into a little cove that nestled among the spurs of the Cumberland Mountains the sun was just finding his way, chasing out the shadows that still lingered here and there, gleaming among the brilliant reds and yellows where Jack Frost had done his cleverest work, and smiling brightly upon a merry little brook that came leaping and tumbling down the hillside.

Near this tiny brook, after it had reached a comparative level and flowed more decorously between a protecting fringe of button-willows, stood a rude, primitive cabin of roughly hewn logs. From its tumble-down rook's-nest of a chimney, built of broken sticks, stones, and mud, a thin curl of smoke was rising straight up on the heavy morning air and losing itself in the blue of heaven.

Presently out of the cabin came a boy, rough, uncouth, ragged, and yet a boy that would seldom pass unnoticed. He belonged to the strange race found exclusively in these coves and valleys. It is claimed for them that they are descended from the offscourings of the Old World who were sent in penal servitude to the New, and who fled to the mountains to escape their task-masters, or, after the proverbial manner of "birds of a feather," congregated there when they had served their time or been liberated. However this may be, they are a queer, ignorant people, having little in common with the outside world; their men brawny and shiftless; their women over-worked, listless, and slatternly; with here and there a God-given exception in both sexes, to furnish forth a hero for my story, which has the unromantic virtue of being a true one.

He was a light-hearted, joyous-seeming creature, who, whistling as

blithely as the mocking-bird in the tree above him and rhythmically swinging a large wooden bucket as he walked, started toward a portion of the brook over which hung two graceful weeping-willows. A close look at him would reveal what was originally a "tow" head gradually merging, under the influence of sixteen summers, into a handsome shock of brown sadly in need of comb and brush; a pleasing, freckled face, such as is the rightful property of most out-of-door boys; a nose that would have been pug but for an audacious turn-up at the end; large hands and clumsy feet; but withal a native (though hardly hereditary) honesty written in the generous lines of his big mouth, a genuineness in his broad smile or hearty laugh, and a depth of true blue in his great eyes that made one pause and wonder if here were not a soul misplaced.

"Jem! you Jem! Whur be you-un er goin' ter?"

She was one of the typical, broken-down-looking mountain women who "poked" her head out of the hole known as a "dore" and called after Jem's retreating figure.

"Jes' down ter the spring, mam, ter git you-un er bucket uv water."

Poor "mam!" It was such an unheard-of thing, until Jem unaccountably developed the startling habit, for anybody to voluntarily do anything for her that she could never get used to it. Even now tears rose to her eyes—real tears: these untutored people know no other kind, and so seldom any that these shamed her, and she forced them back. Then, as if to atone for her momentary weakness, she turned to the rude shake-down in the corner, on which a rough man lay sleeping. Giving him no very gentle shove with her foot, she said:

"Git up frum thar, Bill Smith! Here be you-un er lazin' 'n' er lazin' 'roun', when me 'n' Jem's done bin up fer 'n hour."

The man opened his heavy eyes, swore a sleepy oath, turned over, and resumed his snoring.

"BUCK SUDDENLY PULLED UP AND CALLED BACK."

"Lazy lout," muttered the woman; "never wuz 'n' never will be wuth shucks, 'n' killin's too good fer him! Wonder I hedn't er hed better sense 'n' ter er married him. But he's my Jem's dad——" And the lines about her mouth grew softer as she looked upon the sleeping giant.

Meanwhile Jem lingered. He heard the rumbling of a wagon coming down the valley, and he wanted to see it pass on the "big road" that just skirted the spring. All his pleasant, sunny life he had vaguely fretted at his environment. As far back as he could remember he had watched the wagons on this same "big road" come from he knew not where and go he knew not whither. An undefined longing to solve these mysteries dwelt within him. Sometimes the wagons would stop, and the men, attracted by his bright face, would speak to him; or, before he had grown so large, the women, following a natural instinct of womankind and much to his wonderment, would kiss him. Occasionally they would tell him of a great world outside of and far beyond his comprehension—a world of many people grouped together in great cities upon the banks of a mighty river. But to Jem these things were names only; for how could he conceive that of which he knew less than nothing? Yet the longing grew within him to see these wondrous things; and but for the fact that he knew not where to look for them save by following the "big road," he would doubtless have set forth upon a tour of exploration.

The wagon, drawn by two stout mules, lumbered into sight. Jem recognized the driver as Buck Thomas, to him a most wonderful man, who had drifted into the valley two years before.

In truth, Buck Thomas was no ordinary man. Broad of shoulder, deep of chest, wide of girth, powerfully limbed and magnificently muscled—few would have cared to try conclusions with him. His mind suited his body—it was powerful in its rude way and independent. He was a man of strong prejudices and fearless opinions, nor was he at all backward in expressing them when the occasion warranted. As an occasional grower of tobacco, it was his pet theory that the Government had no right to tax what his land and his labor produced. This he regarded in the light of a personal outrage. Whatever he could, by hook or by crook, keep out of the avaricious grasp of this same Government, he considered as so much of his own money judiciously saved. To evade the internal revenue laws as they then stood was, therefore, one of the first articles of his faith. He practised it faithfully, with caution, but without fear. It was a doctrine that met with great favor among the rough men of the valley, to whom it was an open secret and in whose esteem Buck held a high place.

To Jem, Buck Thomas, by his hearty robustiousness and superior knowledge of the marvellous outer world and its ways, came as an inspiration—a blessing. They were soon fast friends—"fer ever'body tuck ter Jem," as his "mam" said; and many a pleasant hour had the boy beguiled, walking beside Buck's plough while that worthy regaled him from his inexhaustible store of knowledge and adventure—much of the latter, I fear me, and some, doubtless, of the former, having a "local habitation" in Buck's fertile imagination only. Naturally enough his political and revenue views never entered into these conversations; for, after all, Jem was only a boy, and a very ignorant boy thereat, upon whom Buck thought it would be sheer waste of breath to try to make him understand the intricacies of governmental injustice; for what knew he of laws and governments, this simple child of the valley?

As Buck drove past the spring he nodded a cheerful "howdy" to the

boy, who returned the greeting. The wagon continued on down the road for a hundred yards or so, when Buck suddenly pulled up and called back:

"Say, Jem, I want ter see yer."

Jem put down the bucket which he had been holding and approached the wagon. As he came up Buck continued:

"I've been thinkin'—yer know I've got er lot er 'backer whut had ought ter be sold, 'n' I'm goin' down country with it nex' week—how'd yer like to go 'long?"

Jem's breath came short and quick. Here was the impossible about to happen at last.

"Whut'll mam say?"

"Oh, thet's all right. We won't be gone more'n two 'r three weeks, 'n' yer'll see er heap sight uv things."

Buck evidently knew Jem's weak point.

"I'll tell mam, 'n' ef she-un'll le' me I'll sho' go."

"In cose she-un'll let yer. I'll stop by this ev'nin' 'n' speak er good word fer yer."

With this Buck drove on. Jem watched him until the "big road" was swallowed up in a grove of cottonwoods. He then turned slowly away, walked to where he had left his bucket, and carried it, full of fresh spring water, to "mam," who had begun to wonder what had become of him.

The poor woman's consternation can hardly be imagined when, backed up by Buck, for whom he had wisely waited, Jem spoke to her of his proposed trip. There was much coaxing on his part, many "good words" and assurances from Buck, and innumerable protestations on the part of "mam." She "didn't see, nohow, whut the boy wanted ter be er trapesin' erbout fer. He mus' be crazyer 'n er betsey bug. Hedn't she lived right here in the cove all her borned days?—in cose she hed—'n' whut wuz good 'nuff fer her hed oughter be good 'nuff fer Jem." All this she urged eloquently, and much more to the same effect. But Bill, the giant, came to the rescue, and "'lowed ez how it wuzn't er goin' ter hurt the boy none; he wuzn't er doin' no good roun' home; 'n' Buck Thomas cud take keer uv him, he reckoned." So "mam," seeing that all were arrayed against her and that Jem's heart was set on going, with many forebodings of evil from this reckless venturing into the great unknown, gave a reluctant consent.

Thus it came about that Jem was at last to find out where the "big road" went. He mentally resolved to eventually discover whence it came.

II.

At a corner where two busy streets meet, in the heart of a great Southern city, stood a country boy dressed in plain cotton homespun, hands in pockets, and eyes and mouth wide open with acquired and acquiring knowledge. It was Jem. This was where the "big road," after many days of excitement and pleasure untold, had brought him. Hour after hour he would wander about, studying with eager curiosity the show-windows, or standing, as now, on the corners, watch the surging, hurrying crowd of restless humanity rush by in ceaseless streams. What a marvellous experience, this ushering into modern fairyland, for a boy who had been brought up within the confines of a narrow valley, and to whose wildest dreams a hundred people would have seemed a multitude!

Buck had taught him enough about the streets to prevent his losing himself, and his natural quickness kept him out of harm's way.

As the shadows began to lengthen Jem ceased to be a looker-on; and becoming one of the units in the great human conglomerate, himself moved toward a less busy portion of the city. He came presently to a wagon-yard on one of the side streets where Buck had "put up." Here he

proceeded to feed and care for the mules; then he examined the curtain-covered wagon to see if everything was all right. A small portion of the tobacco was still unsold.

While thus occupied, he was spoken to by a pleasant-looking gentleman, who asked if he owned the tobacco. Jem explained that it was Buck's.

"Very well," said the stranger. "I am sorry that Mr. Thomas is not here. I have a small order for some leaf tobacco. You have just about enough left to fill the order; and as what you have seems to be particularly well cured, I thought I would buy it. I am willing to give a good price for it, say—" and the gentleman named a price which Jem knew to be considerably more a pound than Buck had been asking for it.

"If you are willing to sell it I will take it at that price. I am afraid I won't be able to see Mr. Thomas; so unless we can trade I will have to go elsewhere."

Jem hesitated; the man was moving away with an air of indifference; Jem decided:

"You-un kin take it."

"Ah!—thanks."

The tobacco was quickly weighed on the wagon-yard scales—a scant hundred pounds—and paid for. Then the man left, saying that he would send around for it the next morning.

Jem was jubilant. He felt that he had done Buck a good turn; and that they could now go home to "mam," for whom, amid all the delights of travel, he found time to get not a little homesick. The trip had already lasted much longer than they had anticipated, for they had come even unto the city in search of a good market, and (though of this Jem was profoundly ignorant) to get as far away as possible from where Buck was personally known, in order that no suspicion of unpaid revenue might attach.

When that individual came to "turn in" for the night (they slept in the wagon-yard), Jem gave him the money and told him of the trade. Much to the boy's astonishment, Buck's face became troubled. He questioned Jem closely as to the appearance of the buyer, seemed satisfied with the boy's attempted description, and went to sleep.

Toward midnight Jem was rudely awakened by the voices of angry men. A hand was laid roughly on his shoulder as he half-raised himself to see what the matter was, and the owner of the hand gruffly commanded him to "get up" and consider himself under arrest—though what "arrest" might mean he knew no more than would the wild creatures of his mountain home. He got up and stared about in bewilderment. Several men with lanterns surrounded him. Buck was standing sullenly to one side, for Buck had stubbornly resisted these officers, who were the embodiment of his pet antipathy—the Government.

One of the men hastily read, by his lantern's light, some words from a paper, which were all Greek to Jem. Then, before the boy could collect his scattered senses, he was taken out, thrust into a carriage with one of the officers, and whirled away into the darkness of the great lonely city—away from Buck, his only friend in all this vast multitude of souls—away, he knew not whither.

The end of the journey came at last. The carriage drew up before a gloomy-looking stone building, upon which the gas-light glinted coldly and which upreared a cruel front of impenetrable granite, broken only by deep-set, iron-grated windows. But to these things Jem was fortunately oblivious.

Dazed and stupefied, he was carried into a spacious office, where, after a moment's parley with a blue-coated individual and an entry upon a large leather-bound book, the officer who had him in charge turned him over to the tender mercies of a coarse, sour-looking man. This person, tak-

"IT'S ALL RIGHT—I AIN'T AFEARD NOW, BUCK. TELL MAM."

ing a bunch of great keys from his belt, roughly commanded Jem to "come on." Through heavy, clanging doors and along narrow passages, noisome and fetid, filled with a bedlamite pandemonium of shrieks, curses, and drunken ravings from wretched creatures of both sexes, whom misfortune, misery, and sin had brought into prison cells, our thoroughly frightened Jem was half-led, half-dragged, until a door opened upon a rock-and-steel-lined room filled with a mass of the fallen creatures of earth.

Here Jem was left, more dead than alive, wholly ignorant of why he was so treated; and here, as he was unknown and could give no bail, he remained for many weary months, in wondering ignorance and great wretchedness. He was "awaiting trial;" and, unconscious of any crime, understanding nothing and instinctively holding himself aloof from the miserable creatures who shared his confinement, this creature of green fields and open air was left to beat out his life behind prison bars until the slow-revolving wheels of "justice" should come around to him and —crush him!

III.

THE sky was sullen and hazy. The city lay sweltering under an iron band of oppressive heat. A grim silence as of impending doom hung over everything. Each out-bound train was crowded with people escaping from the stifling heat and the dread of what was to come; for Rumor busied herself with awe-struck, whispered reports of a threatened epidemic.

His honor Judge Blank, of the United States District Court, had for days been hurrying through his criminal calendar, impatient to clear the docket and get away from the dangerous city to his wife and child in the mountains. There were but one or two cases left, and his prospective vacation was at hand.

"Call the next case, Mr. Clerk."

"The United States vs. Buck Thomas."

Buck was brought in, pale and haggard from long confinement, but sternly resolute in the consciousness of self-justification. To prevent possible collusion, he and Jem had been separately confined, and he did not know what had become of the boy. He had vainly endeavored to find out, and supposed that when the nature of Jem's connection with the sale of the tobacco had become known he had been released and sent home. It never occurred to him that Jem had also spent the heavy-footed months in jail, "awaiting trial."

"Mr. Thomas, you are charged with selling tobacco upon which the revenue tax had not been paid, and therefore of violating the internal revenue laws. Do you plead guilty or not guilty?"

A moment's dogged silence. Buck lowered his head as if to think; then, raising it and looking the judge defiantly in the face, he said:

"Ef yer mean, did I sell the 'backer withouten payin' the tax—yes. Ef yer mean, did I do enything wrong—no! The Gover'ment ain't got no right ter tax my stuff."

"We haven't the time nor is this the place, Mr. Thomas, to discuss the right or wrong of the revenue laws. The only question for us to consider is, did you or did you not violate the law as it stands?"

"I sold the 'backer; 'r leastwise Jem sold it fer me; 'n' I didn't pay no tax on it nur I didn't aim ter."

"Then you plead guilty?"

"I reckon."

"Are you ready for sentence?"

"I reckon."

"Stand up."

"Mr. Thomas, you have openly defied the Government, and confess to a direct and intentional violation of the law. I feel that men who en-

tertain views like yours are dangerous to the community and a menace to the commonwealth. I consider it my duty, therefore, to punish you as severely as the law applicable to offences of this character will permit; both for the purpose of administering a wholesome corrective to yourself and of removing, for a time at least, a dangerous element from society. You are sentenced to a year's imprisonment.

"Mr. Marshal, take charge of the prisoner.

"Call the next case, Mr. Clerk."

"The United States vs. Jem Smith."

Buck was leaving the court-room with the officer; but when he heard Jem's name called he sprang back and cried:

"No—no! Fer God's sake, jedge, don't try the poor boy! It warn't none uv his doin's. It wur all mine —ever' las' bit. He didn't know nothin' 'bout no laws nur nothin'— 'n' the 'backer didn't b'long ter him!"

"Officer, remove the prisoner."

Buck was forcibly carried out, struggling and protesting Jem's innocence.

Poor Jem! pale, thin, and terror-stricken—the merest shadow of his former self—even "mam" would scarcely have known him. He had to be half-carried to a seat, and when the charge was read to him and he was called upon to plead, could answer nothing. A young attorney, appointed by the court, entered a plea of "not guilty" for him, and the trial proceeded.

The pleasant-looking gentleman—a government detective—to whom Jem had sold the tobacco testified fully as to the facts of that transaction, and also to the fact that the revenue tax had not been paid on the tobacco so sold. The prisoner himself failed to throw any light on the subject, his testimony being limited, through ignorance and fright, to:

"I dunno—I dunno nothin' 'bout it. I wants ter go back home—I wants ter go back home ter mam!"

The judge—a good man on the whole—was touched by this heart-cry for "home" and "mam," but sternly considered the prisoner's refusal to testify as due to obstinacy.

The district attorney, in his opening address to the jury, expressed his regret that one so young should have been led into such flagrant criminality, for that the boy was led into it he doubted not; but he still more regretted that he should imitate the worst features of the man who thus basely influenced him by preserving a dogged, defiant, and obstinate silence.

Continuing, he said:

"Silence, gentlemen of the jury, is never reconcilable with innocence. Only the guilty are afraid to speak out—only the guilty shun the truth. That the prisoner is guilty there can be no doubt. The testimony is clear and incontrovertible. It shows a deliberate violation of the law. There is no defence attempted except ignorance, which is no defence; and which in this instance is, I doubt not, most cleverly feigned.

"The revenue laws are being constantly violated. This must be stopped. To do so effectively, exemplary punishment is necessary. This boy's accomplice and instigator entered a plea of guilty and has received his sentence—much too light a one, I regret to say, for the law in these cases is very lenient. I must now ask you, gentlemen, to add another salutary example, by bringing in a verdict against the prisoner at the bar. Of his guilt, I repeat, there can be no doubt; and I sincerely hope that men of your intelligence are above being imposed upon by the threadbare excuse of ignorance, which, however his honor will charge you, cannot be considered in weighing the evidence."

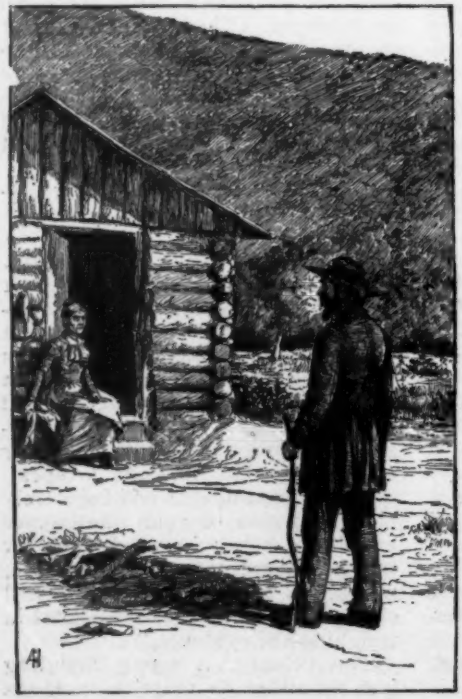
The defence, a young fledgling just admitted to practice, made a rambling, disconnected talk to little

or no purpose, except to ask the jury's consideration of the prisoner's youth and evident ignorance.

The prosecution closed with a terse, recapitulatory speech. The judge's charge was short and to the point—merely stating the law in the fewest possible words. Without leaving their seats the jury returned a verdict of "Guilty."

Guilty! Little did Jem know the fearful import of those two syllables, voiced by the spokesman of twelve good men and true. Guilty!—it is the brand of the pariah—the social outcast. Once let it be burned into the character by the properly appointed authorities, and though you are as innocent as purity itself, you will be forever shunned as one touched by the plague.

What a travesty on justice! An honorable judge, a district attorney, twelve jurymen, a hired witness—all the ponderous legal machinery of a mighty government, brought to bear upon—what? a poor, frightened, trembling boy, ignorant of everything save utter loneliness and perfect helplessness; vaguely aware that a farcical tragedy, in which he is somewhat interested, is being solemnly enacted—that a fearful phantasmagoria is passing before him—a terrible dream of which he understands nothing. But the law is plain. It has been violated—ignorantly maybe; but what of that?—ignorance of the law is no excuse. Then too the honorable judge is frightened by Dame Rumor, and must needs hurry through with his work; the district attorney cares for nothing except the glory of a conviction—why should he be lenient with a miserable little "Covite?" the jury are listless, tired, and hungry—it is almost the dinner-hour—they think with the judge and the district attorney; and the witness is merely earning the fee paid him by the Government for his shrewdness in ferreting out these troublesome law-breakers. Little chance here for badly defended innocence.



"THAR, SHO 'NUFF, WUR PORE OLE MAM."

This was the last case on the docket. The judge hurriedly dismissed the jury; asked the prisoner's attorney if he wished to appeal; was told that he did not; asked the prisoner if he was ready for sentence; received a hoarse "I dunno" for answer; uttered a few trite platitudes about youth, crime, etc.; sentenced the boy to six months' imprisonment, and gave him in charge of the marshal.

His honor then adjourned court, brushed the cobwebs of business from his brain, ate his dinner, and went light-heartedly to his wife and child. Little did he think, as he lounged and smoked and took his ease and

pleasure at the cozy mountain resort, that in the valley which added so much to the beauty of the view was a poor, heart-broken woman, patiently yearning, waiting and watching, day after day, month after month, for her boy's home-coming. Bless you, no!—the trial of the boy was only a very ordinary item in the regular course of his judicial transactions; besides, what did his comfortable honor, the judge, know of the possible misery—far-reaching misery—that the letter of the law might cause?

That night yellow fever broke out, and the retreat from the doomed city became a panic.

IV.

"Buck! air yer thar, Buck? Come closter ter me—I'm afeard. I b'l'eve I'm er goin' ter die, Buck. I don't hurt nowhurs now, but I'm so weak like—so weak. Whut d'yer reckon becomes uv er feller like me when he dies, Buck? Oh! I'm afeard—I'm afeard!"

"Hush, Jem, honey—hush. Yer ain't goin' ter die. Yer goin' ter git well, 'n' le' me take yer back ter yer mam——"

But the man had to turn away to hush a groan of agony, for all too plainly he saw the boy's death-warrant written on his face.

They had been sent back to the same jail—Jem and Buck; and while the fever raged they were all but deserted and nearly starved. At last the fever reached the jail itself and marked its victims by the score. Men and women died around them daily—so fast that their neglected bodies would putrefy before they could be hauled away and dumped into the trenches. Finally it fastened upon Jem, and found, in his famine-wasted body, an easy prey.

Buck, the mighty of brawn, hovered over and nursed him with a woman's tenderness, but all to no purpose. In a few days the death-film was in his eyes and the death-damp on his brow.

He had suffered terribly and raved in the delirium of fever. He had cried out in his agony for his "mam;" and in his calmer moments seemed wandering through his beautiful home-valley, re-living the happy life so rudely interrupted. Once Buck drew back from him and shuddered. The poor, tired brain and ceaseless tongue were going over the details of the arrest, imprisonment, and trial. Not a minutia was wanting; and he ended with:

"But it wur Buck's—it wur sholy Buck's. I dunno—I dunno—I dunno. It wur Buck's—it wur Buck's."

Now the end was near. The boy dropped into a peaceful slumber. After sleeping for an hour or more he suddenly awakened, turned to Buck, smiled faintly, and said:

"It's all right—I ain't afeard now, Buck. Tell mam."

That was all.

As Buck stooped over him he saw that there was nothing but the poor, diseased body left; and then, perhaps for the first time since his childhood, the strong man wept.

V.

I knew Buck Thomas for many years. One morning there came into my office a man from whom I recoiled in horror. Never have I seen such a mighty wreck—hollow-eyed, sunken-cheeked, a forehead seamed with agony of soul, and a massive framework of bones over which the skin hung loosely.

"Don' yer know me, Mr. Henry?"

The voice was subdued and broken. Like the man, it seemed a remembrance of the past—a ghost of other days.

"Don't yer recerlec' Buck Thomas?"

Buck Thomas! Could this wretched, wasted creature be Buck Thomas,

he whom I remembered as a brawny giant of iron will and flawless constitution? But Buck it was; and, oh, so changed!

He told me Jem's story in broken fragments, and then he added:

"But thet wurn't the wust—thet wurn't the wust. Yer see, I served out my time after he died; 'n' ever' day, sittin' thar in the jail, with nothin' ter do but ter think, 'n' think, 'n' think, I cud hear thet boy's voice sayin', 'Tell mam—tell mam.'

"I didn't mind the jailin' fer myself, Mr. Henry. I cud er stood it easy, fer I wuz right, 'n' er year in jail wudn't er hurt me none; but ter er bin the death er thet boy—sech er likely boy, Mr. Henry—'n' ter hev ter sit thar by myself, in my cell, 'n' think uv it; 'n' ter hev ter think 'bout hevin' ter go back 'thout him 'n' tell mam—I tell yer, it nigh onter et my heart outen me.

"Ez soon ez I wur discharged, I went right straight back ter the Cove. Oh, Mr. Henry! I never'll fergi thet day—I'm dyin' uv it.

"I asked the fust man I met in the neighberhood ef Bill Smith's wife wur livin' yet. 'Yes,' he sez, 'livin', but—' 'n' he teched his hed.

"'Yer see,' sez he, 'her boy, Jem, went off with er feller named Thomas two year ergo, 'n' ain't never been hearn tell uv sence. He wur er likely boy, 'n' it purty nigh onter killed she. Her looks fer him 'n' waits fer him ever' day—sets out in front uv her cabin, 'n' tends on er little sickly rose-bush whut Jem planted afore he lef' 'n' thet hez punied erlong tell now. Bill he cusses 'roun' 'n' lazes mos' uv the time; but he's good ter she when he ain't drunk, which air mighty seldom. Who might you-un be, enyhow, stranger?'

"I tole him, 'n' he run frum me like I wur er hant. Mebby I looked like one.

"I went on ter the cabin; 'n' thar, sho 'nuff, wur pore old mam sittin' out in front. Well, sir, she knowed me the minit she sot her eyes on me—which air more'n mos' folks does; 'n' she cum at me like er wil'-cat, screamin':

"'Whur's Jem? whur's my Jem?'

"I helt her off 'n' she sorter quieted down. Then I cud see thet her senses hed cum back ter her, 'n' I wur sorry, fer I hed been hopin' she wudn't be able ter un-'erstan'.

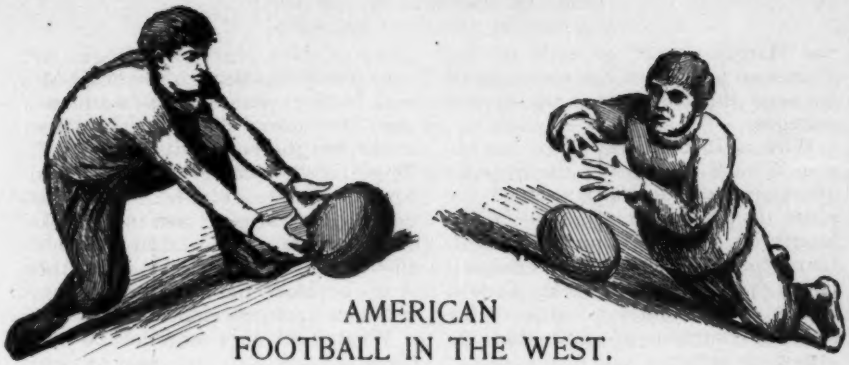
"I tole her all erbout her boy, frum beginnin' ter end; 'n' she jes' sot still 'n' never said er word. When I finished she turned 'n' looked at me—thet wur all; but I'd druther she'd er stabbed me with er knife. Thet look hants me—I tell yer, it hants me; 'n' it's killin' me.

"Mebby I'd better die, fer I'm the onliest one uv us whut's left. She died thet night."

COMPENSATION.

BY WILLIAM FRANCIS BARNARD.

For every joy that goes new joys are given,
As when the golden sun dies down to death,
The fair round moon, uprising, wandereth
Across the happy star-sown fields of heaven.



AMERICAN FOOTBALL IN THE WEST.

BY C. L. CLEMANS.

IN the field of American college sport football is supreme. Boating, baseball, and the track have their admirers and devotees, but nothing excites such general interest or creates such intense excitement as football—American college football.

Ask a Harvard man what is the loftiest ambition in the athletic world, and he will answer, "To do what Cumnock did." A Tiger victory at Thanksgiving is the object dearest to the heart of the Princetonian, while New Haven men will tell you that the chief glory of good old Yale is fourteen years of football with but one game lost in that time to Harvard and next to nothing to Princeton. Farther West it is the same. Michigan may defeat all comers at baseball, but her cup of joy will never be full until the rough and fast work of the Cornell men has been met and bested on the gridironed field. And so it is with the men of Berkeley, whose one hope is to retrieve their laurels of years lost to the boys in red of the Leland Stanford, Junior, University. The lesser lights of the coast are just as eager in their love for the sport, and the Hopkins Academy, Cogswell Polytechnic, Oakland and San Francisco high schools and the Berkeley Gymnasium look upon the football pennant as the chief trophy of the athletic field. There are, besides these, many other football teams in California. Those of Los Angeles, San José, Pasadena, Stockton, and the Napa College have shown great interest, but perhaps the best outside of the two universities, and the equal of either in the material it is composed of, is that of the Olympic Athletic Club of San Francisco. The universities at Berkeley and Palo Alto have, however, the great advantage of constant practice, which cannot fail to tell in the team work, and this always wins the day.

The increasing interest in the game in the far West was attested by the gathering of fully 15,000 people at

THE "DELLAND" FLYING WEDGE.

the Haight Street grounds in San Francisco to witness the recent game between the teams from these rival colleges.

Why is it that the game has assumed such a place in the popular affection and practically usurped the place of the national game in the hearts of the collegians and sport-loving people generally? Perhaps it is, as has been said, that it most nearly approximates a battle or the old-time tournament—only that the armor is softer and weapons are barred. Football is a contest for every man in the "line" or behind it; and one, moreover, in which skill, endurance, and presence of mind are as necessary as in contests with the gloves or with arms. Besides, it has a dash, a spirit, and a system of tactics impossible to the dual conflicts of the ring, and in a way resembles the tourney ring contests of Ivanhoe and Richard of the Lion Heart. This is why it is so exciting and attracts the vast crowds, always on hand in rain or sunshine to see a game between two great universities. But there is another feature which attracts the sport-loving public, and that is the absolutely amateur nature of the game. Nearly all other sports have, in some measure, fallen into the hands of professionals, and have, therefore, lost much of their hold on the popular mind. I doubt whether there is, or ever has been, a professional football team in the United States. The men play for the glory of their clubs or colleges and for victory—as dear to the heart of a true football man as to the soldiers of the Old Guard. There is still another cause for the popularity of football. Thus far its managers have not allowed it to be overdone. The Eastern football season lasts six weeks. During that time nothing else is thought of in athletic circles; and then it is over until the next fall, when it is taken up with renewed vigor.

What kind of a man does it take to play a winning game of football? Physically, the limits are far apart. It is not always the heavy team that wins; though, other things being equal, weight counts, and the "centre" and "guards" in the "rush-line" must be heavy to withstand the battering-ram tactics of opposing "backs." "Line-bucking" has become a favorite play of late years. The "half-backs," too, should have weight, and also that ability peculiar to a first-class football man to anchor himself to the spot where he stands when opponents charge his position; and still, when occasion demands, must himself be able to dash against the "rush-line" and break it. The "end rush" must be a whirlwind in whose arms the advancing "half-back" is always caught, or "tackled," and always thrown *backward*. Taken together the "rush-line" must form a wall, behind which the "quarter-back" is secure and the other "backs" confident. As for the "backs," the "quarter" may be a

small man, but he must be the quickest man on the team, cool of head, steady of arm, and be ready to fasten himself to the turf as firmly as the "centre" if the line needs his aid. The two "half-backs" and the "full-back" may be of very different weight and character. The man who can run forward or sidewise, whirl, dodge, and "brush off" all tacklers, at the same time firmly keeping on his feet, does not require much weight, for he can play an "end" game (running around the rush-line), and such tactics gain the most ground when successful. But if a "line-bucking" game is desired (breaking through the "rush"), then the more weight he can strike the line with the better.

THE WEDGE IN ACTION.

After the collision the more push and dogged perseverance, backed by the persistent pushing of those who form his own rush-line, the more ground will be gained. In addition to physical qualities the men must have courage, decision, nerve, and quickness of vision. The linemen must be obstinate as well and ready for that hardest of battles, a fight against hope; for in an even game, during two-thirds of the time they cannot hope to stop the advance of their opponents.

Rugby football was brought over from England in 1875. American ingenuity, however, soon developed a game very different from the one in which it took its rise. In the Rugby game the ball is placed between the opposing teams, which number fifteen men each, who attempt to kick or push the ball toward their opponents' goal. In this game a majority of goals or touch-downs wins, while in the American game a majority of points gains. In the old game there are eight "forwards," two "quarter-backs," two "half-backs," two "three-quarter backs," and a "full-back" or goal-keeper. The quarter-backs stand behind the line ready to pick up the ball when it comes through. They then throw or pass it to the backs behind them, who may run forward with it. The American players kicked each other's shins for a season, and then discovered that it was a clever play to leave an opening in the line through which the half-backs might expect the ball to come, and then by quick passing give the three-quarter backs an opportunity to make runs while their opponents were still entangled in the "scrimmage." They then got to rolling the ball between the lines, each side pushing and waiting for the other to pick the ball out of the "scrimmage." Finally it was discovered that it could be kicked backward as well as forward; "back-heeling," this was called. At first every man in the line might do this, but soon the "snap-back" (the "centre-rush" of to-day) was evolved, and the game became very much what it now is. American players claim that the present American game is more scientific and permits of more generalship. This is true, for the American football captain knows just when and where to

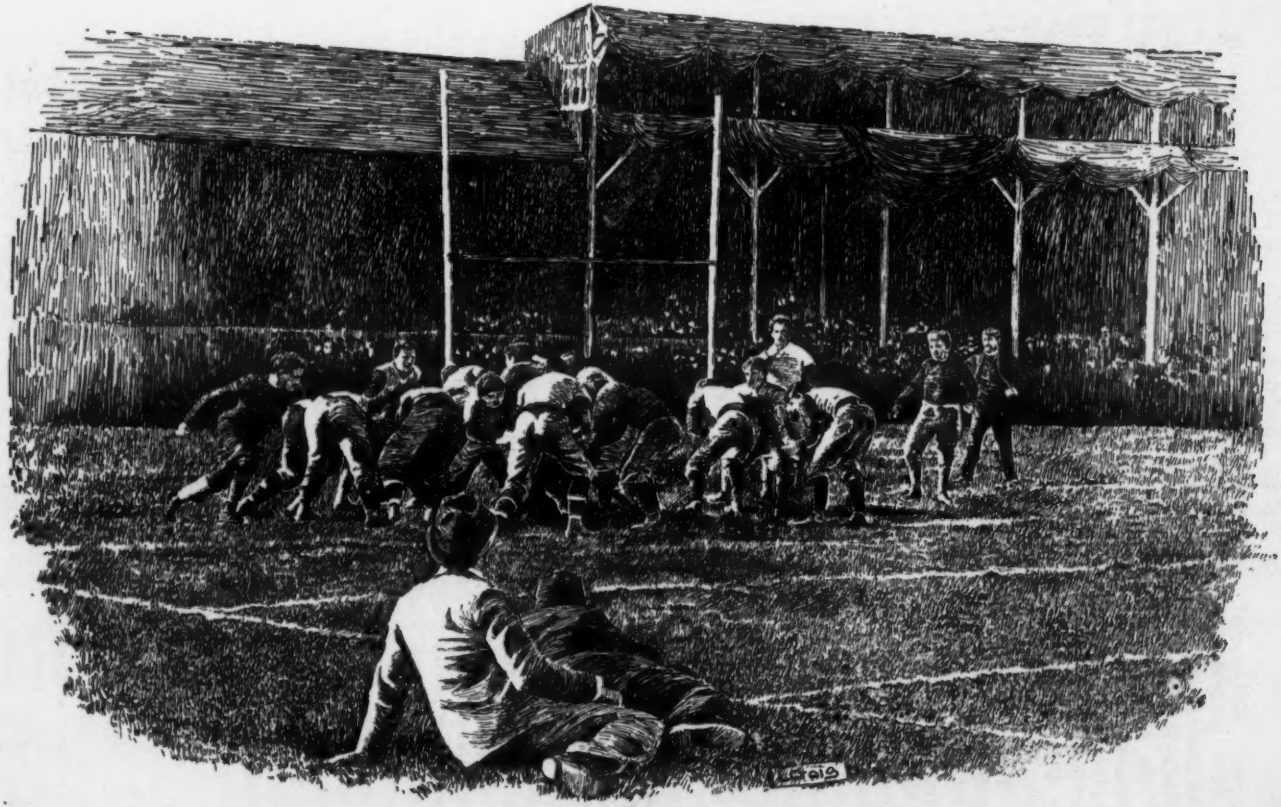
expect the ball, while in the English game it is largely a matter of chance. Another marked difference in the rules of the two games is in what is known as "blocking." The Americans allow their players to guard the man running with the ball, using their elbows and bodies to prevent his being "tackled" by an opponent. This interference would be rank "offside" play in any Rugby game.

The American game was first introduced at Harvard, but under the direction of Walter Camp, who is justly called the father of American football, Yale soon took the lead, and in the fourteen years that her football interests have been in his charge, first as a student and then as coach, she has lost but once (in 1890) to Harvard. Princeton has fared little better with the New Haven University, while other universities have been content merely to score against Yale. To Princeton belongs the credit of bringing out the "wedge" players, but Harvard was the first to use the Delland "flying-wedge," recently put to good use on this coast by the wiry boys in red of the Stanford University.

On the Western coast the first teams were those of the Phœnix, Wanderers, and Union clubs. These played some exciting games in 1882 at the old Recreation Grounds in San Francisco. All of thesematches were under the old Rugby Union rules. Dean, Sime, and the Searles brothers were the mainstays of the Phœnix team, the victor in these games, but the "punting" of Nicholson of the Wanderers—the famous Englishman with the green and yellow jersey—has never been beaten by any player that has stepped on the gridironed field. Edgar Foster was the captain and star player of the Unions, and in "line bucking" and "brushing off" no man in the West, unless it be the idol of the Wasps, Franklin Hittell, has ever excelled him. Soon the Merion Cricket Club placed a team in the field, and for the two succeeding years the only games played on the coast were those between the University of California—just entering the arena—the Unions, Merions, and the team of Brewer's Academy at San Mateo.

In 1885 Kenneth McKay and John Craig organized the Wasps from the best men of the old teams, and a new era in football began in California. Two closely contested games between this team and that of the University of California resulted in a score of 0–0 in each instance. These matches awakened a fresh interest in the game here, and in 1886 the California Football League was organized and a series of twenty games was played at the Olympic Park in Oakland by teams from the University of California, Reliance, Orion, and Wasps clubs and the Hastings Law School. Prior to this the West knew nothing whatever of the intercollegiate game —American football. The California Football League decided to drop the Rugby Union game, hitherto played entirely in the West, and for the first time here the game was played with eleven men instead of fifteen. All the features of the old-style game were not eliminated, and it was not until 1888, when Nourse of Amherst organized the Posens, that full-fledged Eastern football was played here. Nourse, the hated by Berkeley men and beloved by all others of the football field, first taught the University men what it was to learn defeat in a series of games, though many times before the Wasps and Orions had showed them a thing or two in football that caused the men of Berkeley to drape their blue and gold with black.

After Nourse came Joseph Tobin from Georgetown College, in the fall of 1890, and with him the latest plays of the crack Eastern 'varsity teams. Perhaps it is only fair, however, to say that even before the advent of Nourse or Tobin on this coast, Shafter Howard of Harvard taught the men of the State University many new tricks in vogue in the East. To his



PUTTING THE BALL IN PLAY AFTER A "DOWN."

long and well-placed "punts" was due, in a great measure, the victory of his team in the Californian Football League series. His later work with the San Franciscos and Olympics has been far below his old-time form.

In the matches with the Posen team, Charles Wesley Reed, the captain of the University team, and Fred McNear, its half-back, did some phenomenal work. The playing of the latter has been characterized by competent critics as equal to that of any Eastern man playing that year. George Wellington, Frank Pugh, and J. Hunter Harrison were star men on the Posen team then, and Pugh still shows his form in his quarter-back play with the Olympic Athletic Club's eleven. John B. Sherrard, the present captain and "end-rush" of the same team, first learned to tackle as he does under the tuition of Nourse. It would not be just, in writing of football in the West, to omit the name of Felton Taylor, who has in years past done clever half-back work for the Union, Wasp, Reliance, San Francisco and Olympic teams. Oscar Taylor, the present "full-back" of the Berkeley team, first showed his ability on the football field when his long "drop-kicks," when a member of the Alerts, won his team fame in the "Little League" series of 1887.

The Academic Amateur Athletic Association, consisting of the San Francisco, Oakland, and Berkeley High Schools, the Hopkins Academy and the Cogswell Polytechnic School, maintains a football league, of which the Hopkins Academy won the pennant in '91 and the Oakland High School in '92.

When Joseph Tobin came home from Georgetown College in 1890 he organized the San Francisco Football Club, the forerunners of the Olympics, and introduced into their games the close play everywhere in vogue in the East. Hitherto the coast teams had played almost entirely the "long-pass" game, instead of playing close up to the rush-line as at present. This was the game which the University of California depended upon in its first games with Tobin's team. The contest of that year proved conclusively that the close blocking and rushing play was superior to the old style, and the game with the Berkeley boys resulted in a score of 44–0 in favor of the San Franciscos. Since that time the "long-pass" game has never been seen on the coast. Last season the San Franciscos, or Olympics, won against the Berkeley men by a score of 6–0, but this year the blue and gold has triumphed in two games out of the three played with the Olympic team.

The great game and naturally the most exciting of the season of 1891–92 was that between the University of California and the Leland Stanford, Junior, University. This was the first intercollegiate game played on the Pacific slope, and the boys from Palo Alto carried away a hard-earned victory by a score of 14–10. The Berkeley team had been organized for several years and considerably outweighed their opponents, but it was soon seen that they were no match for the boys in red, who played a more modern game. The team work of the latter was better, and, besides, they played what is known as an "end" game, and a rushing one; while the Berkeleyans, with their heavy backs, depended upon centre rushing almost entirely.

During the past few months football on the Pacific slope has received an impetus that it has never had before, and never has it held such a place in the public's heart as at the present moment. This is owing entirely to the enterprise displayed by the managers of the Berkeley and Palo Alto teams. Immediately after the Yale-Harvard Thanksgiving Day game in the East, Walter Camp and Thomas Lee McClung, respectively the famous coach and the famous captain of Yale's team, left for the

coast; the first named to act as coach for the Stanford University, and McClung to act in the same capacity for the University of California. For weeks the men of both colleges were hard at work, and in several preliminary matches with the Olympic Athletic Club's eleven, the Berkeley men made slightly the better showing. The coaching of Camp and McClung soon demonstrated that both teams had much to learn, for while the individual players were not so far behind the best men of the East, both elevens were sadly deficient in team work. The great game of the year took place on December 17th last, at the baseball grounds in San Francisco, when over 15,000 people assembled to witness it. This was the largest gathering that ever assembled to witness any athletic event in the West.

In weight, the Berkeley men once more had the advantage and they put it to good use, while the Stanford men proved a speedier and quicker lot. Hunt, the Berkeley captain, is a capital "line-bucker," and time after time battered away at the opposing rush, but the boys in red contested every inch of the ground, gaining the ball repeatedly on the fourth "down."

Clemans and Walton, the Stanford halves, did some wonderful work in going around the ends, making brilliant runs of thirty and forty yards, aided by good interference on the part of their team. Code of the same team did good quarter-back work, as did also Rich as guard. The Berkeley men resorted to the wedge almost entirely, and only once did Oscar Taylor, their full-back, essay a "punt." Then took place one of the cleverest plays of the game, for Henry, the Berkeley "end-rush," after a lightning spurt, tackled Kennedy, the Stanford full-back, as soon as the latter caught the ball from Taylor's punt. Walter Camp characterizes this as one of the best plays of the kind he has seen on any football field, and Camp also praises the "double-passing" of the Stanford men as equal to that of McClung's famous Yale team. The play throughout was snappy and quick. Both sides gained two touch-downs and both failed twice at goal, making the score a tie, 10–10. The trophy offered the contestants by the University Club of San Francisco will have to be battled for again next season.

The coming of Camp and McClung has given new life to the game in the West, and the interest displayed by the press during the recent games is a sure indication of the esteem in which it is held here now by the public.

PARKS AND RESERVATIONS.

BY MAURICE NEUMAN.

THE Congress of the United States by its act entitled "An Act to set apart certain tracts of land in the State of California as forest reservation," approved October 1st, 1890, set apart for said reservation an area, exclusive of the original Yosemite grant, of about 40½ townships, or about 1,458 square miles, or about 932,600 acres, situated in the counties of Mariposa, Tuolumne, Mono, and Fresno—the principal part of it, over 800,000 acres, lying in the two first-named counties. This reservation is generally known as the Yosemite National Park.

Under date of December 2d, 1892, B. F. Allen, special agent of the General Land Office, gave notice in the press that he should recommend, under Section 24 of the act of Congress entitled "An Act to repeal timber culture laws and for other purposes," approved March 3d, 1891, to have set apart a tract of land irregular in shape, extending from the northwest corner of Township 5, S. R. 21, E., M. D. M., in Mariposa County, to the southeast corner of Township 28, S. R. 63, E., M. D. M., in Kern County, containing 158 townships, or about 5,688 square miles, or 3,640,000 acres of land in round numbers, which tract of land was proclaimed by President Harrison as a reservation shortly before the expiration of his term of office.

Here we have then, set aside as parks or reservations, from the counties of Tuolumne, Mono, Mariposa, Fresno, Tulare, and Kern, in California, an area of about 7,146 square miles, or 4,573,000 acres; an area equal to more than twice the area of the States of Rhode Island and Delaware, or nearly the area of the States of Connecticut, Delaware, and Rhode Island combined, and only 309 square miles less than the State of New Jersey.

When a tract of territory of that size is being alienated from the legitimate uses and industries of the people, it is in order to inquire whether the present and future benefits which are supposed will be derived from such reservations outweigh the destruction of present industries and future possibilities of development contained in said reservations.

To arrive at any just conclusions it will be proper to examine, first, for what purposes, ostensibly, said reservations were established.

The act of Congress of October 1st, 1890, creating the National Yosemite Park, provides that the territory comprising it, excepting the original Yosemite Valley grant and *bona fide* entries of land made within the limits (of the reservation as described) under any laws of the United States prior to the approval of the act, "shall be under the exclusive control of the Secretary of the Interior, whose duty it shall be . . . to make regulations . . . providing for preservation from injury of all timber, mineral deposits, natural curiosities, or wonders within said reservation, and their retention in their natural condition"—and Section 24 of the act of Congress approved March 3d, 1891, referred to above, provides:

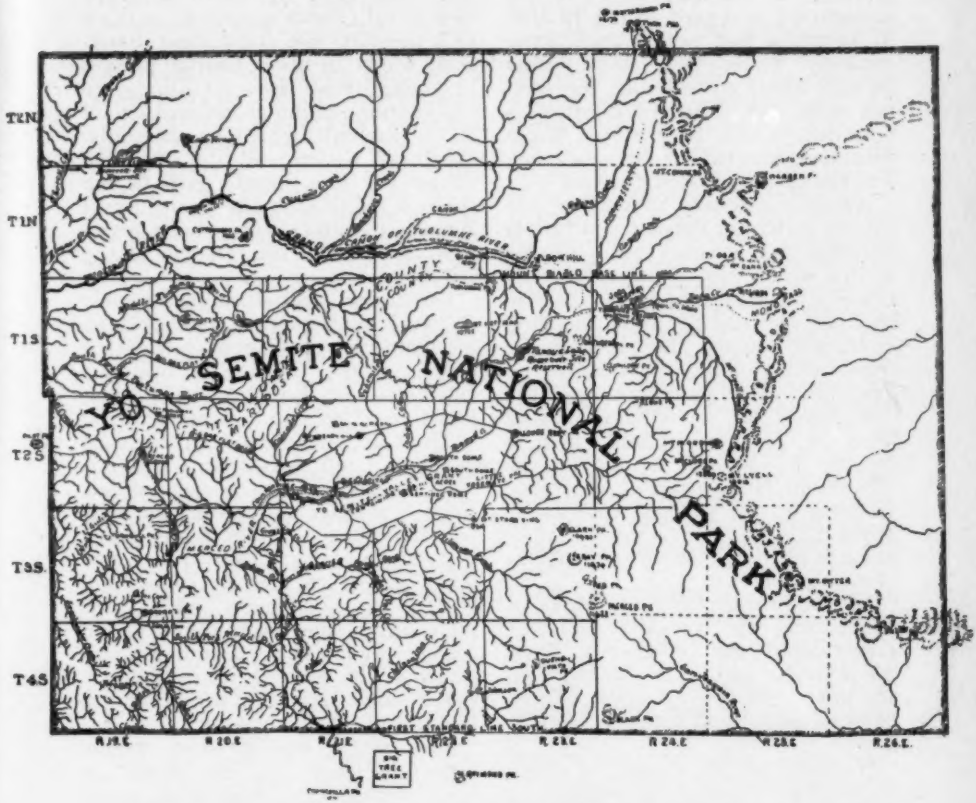
"That the President of the United States may from time to time set apart and reserve, in any State or Territory having public land-bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall,

by public proclamation, declare the establishment of such reservation and the limits thereof."

It would appear, then, that the preservation of timber, of mineral deposits, natural curiosities or wonders within the reservation is the ostensible object for which the Yosemite National Park was established, while there is no special purpose avowed in the law under which the other reservation was proclaimed, but presumably it was for the preservation of forests.

Now if the preservation of forests is considered a sufficient cause for making reservations of large tracts of land, thereby causing the destruction of other vast interests, it must be necessarily because there is danger of destruction of forests if they are held under private ownership.

As to the value of the preservation of forests there can be no doubt—for economic, climatic, and æsthetic reasons—although a great deal of the prevailing sentiment in favor of forests is not based on facts.



Wood is a necessity of the human race for innumerable purposes; therefore a destruction of the natural supply to satisfy our immediate wants, without taking into consideration the necessities of posterity, would be not less than a crime. Then forests are a thing of beauty always, and to

some extent exercise climatic influences by moderating the temperature.

But the generally prevailing theory that forests increase the rainfall appears to be exploded; the latest conclusions arrived at by investigators seem to prove that the existence of forests neither creates nor augments rainfall. If the statements in the newspapers in regard to the rainfall in Australia that caused such extraordinary floods there last winter (winter here) are reliable, the rainfall in the not timbered districts in Queensland and New South Wales was more than twenty per cent heavier than in the wooded districts.

Another generally prevailing sentiment is that the existence of forests prevents the washing away of the soil on which they grow, and assists streams in maintaining a uniform regimen, by storing away the precipitation among the roots of the trees, and yielding these stores up gradually, thereby preventing on the one hand the immediate rushing away of the precipitation, which is causing floods, and acting on the other hand like a system of reservoirs, yielding up the restored waters only gradually. This is certainly true, but it is also effected by other forms of vegetation.

But admitting fully the value of forests and the necessity of their preservation, the question is: Does the policy of letting the people own and utilize the timber supply offered by our forests lead to their destruction?

No! will be the answer of every person who has had the experience of having lived among these very forests of the western slope of the Sierra Nevada from the days of the settlement of the State after the discovery of gold, who has seen whole hillsides deprived of the last tree by the axe of the miner during the flush times of the placer-mining period, and who sees now these same hillsides covered with a thicker growth of forest, produced spontaneously by mother Nature, than they were before the miner ravished their virgin beauty.

Why, anybody can see in our mountain counties, where land has been cleared of its natural timber growth for agricultural or other purposes, that in places where cultivation has not been kept up continually the new forest growth springs up as thick as it possibly can stand; and if anybody wants to see a prolific growth of young forest trees, let him go to the vicinity of the abandoned site of an old sawmill, which has been discontinued because all the available timber has been cut off; there he can see how luxuriantly the young forest springs up, after having been given light and air by the removal of the old trees.

Our forests reproduce themselves, and such reproduction could only be prevented by continuous cultivation of the ground. Is such a continuous cultivation of these reserved forest lands ever likely to take place?

There are undoubtedly valleys, and meadows, and flats that could not only be advantageously cleared and planted to other vegetation, but that would produce certain fruits more perfect and abundantly than any other lands; but the fact is that out of the 4,500,000 acres which are included in the reservations under consideration, five per cent, or 225,000 acres, would be a liberal estimate of the amount of land that would ever be brought under cultivation.

The rest of that territory would remain a forest; if cut down, it would spring up a forest again, more luxuriantly than before.

A great deal has been said about the devastation caused to these mountain forests by fires, supposed to be principally set by parties grazing live-stock in the mountains.

Why a man who owns sheep, cattle, or horses and takes them to the mountains to let them subsist during the summer on the pastures which then, and only then, become availa-

ble, should burn up these pastures that are to feed his stock, is a conundrum that has not been explained yet, if such a state of affairs really does exist.

The fact about these mountain fires is, the dried herbage, when not consumed by stock, the fallen leaves and branches of trees, and, more than all these, the trees that have fallen down from decay, form during the summer an accumulation of highly inflammable material which the least spark will set on fire. If this accumulation is burnt out every year no harm accrues to the trees, not even to the young growth; but the longer the accumulation of inflammable material goes on, the more severe will be the fire. The Indians, the original occupants of our mountains, acted on this principle before the occupation of the country by the whites, and probably do so now in out-of-the-way regions, by burning the accumulated trash up every year—thus preventing more destructive fires.

But mark: these forest fires do not destroy a forest; they devastate it by burning up large amounts of available lumber; a forest area that has been swept by fire produces a new forest if left to itself.

The greatest factor in these fires is the number of trees that have fallen down. Every tree, if left to its natural course, has its life, like any other living organism; it springs up, grows to maturity, and decays. If utilized when at its maturity, it becomes a source of profit; if left to decay, it becomes only an additional danger to other trees. Experience has shown that on an average each acre of timber area will produce each year forty cubic feet of wood. Applying this to the reservation of 3,640,320 acres we have under discussion—as this reservation appears to be a forest proposition pure and simple—we have 145,612,800 cubic feet of wood as the yearly increase. The utilization of such an amount of wood would leave the forest intact; if not utilized, that amount would only be so much additional fuel for any coming conflagration. Now, a reservation having been established, what is the Government going to do with these 145,612,800 feet of wood becoming yearly available? not to mention the existing available timber, of which 75,000 feet per acre is said to be a conservative estimate.

Is it going to let all the timber decay or burn up, or is it going into the business of cutting, sawing, and selling timber itself? or if not, is it going to lease the business out? if the latter, to whom? To a few favored corporations, or to the people? If to the latter, what is the use of having a reservation? If the answer is, the better to regulate the cutting of timber for the purpose of preventing the destruction of the forest, the reply is that the forest cannot be destroyed except by continuous cultivation of the ground, which is impossible because impracticable, and that the cutting down of matured timber can be regulated by State legislation. Then why not let the people go on and utilize the timber supply as needed, by letting them obtain these lands in private ownership, under regulations preventing monopolies?

Why should the citizens living in the vicinity of the reservation or in that part of the San Joaquin Valley adjacent to it, and whose needed timber supply promises to be immense in the near future, be compelled to forego the supply right at hand in this reservation, and be compelled to import it from Oregon or Washington Territory, and haul it long distances over the railroads from the ports of entry to its ultimate destination?

And as far as the prevention of fires is concerned, it seems to be evident that private ownership of these forest lands, with its accompanying settlements of miners, agriculturists, lumbermen, and persons following other industries dependent on their

BIRD'S-EYE VIEW OF COUNTRY ABOUT LAKE MONO.

natural products, would be productive of a great number of people interested in the prevention of fires, which would more effectually stop them than any other means that could be provided.

The second object for which the Yosemite National Park reservation ostensibly was established is "the preservation from injury of mineral deposits . . . and their retention in their natural condition."

Now, a mineral deposit preserved and retained in its natural condition is of no value whatever; it becomes of value only by being taken away from where it is retained in its natural condition, so that it can be used. Of what use and benefit would have been the coal, iron, and petroleum of Ohio and Pennsylvania, the silver of Nevada and Colorado, the gold of California, if these mineral deposits had been preserved and retained in their natural conditions?

And these mineral deposits must be enormous, as the greater part of the area set apart for the park is mineral land, in which not only a number of mines are being worked now, but in which indications of mineral deposits without number have been discovered, hardly any of which have entered into a state of development yet.

In Mariposa County, in townships 3 and 4, south of ranges 19 and 20 east, M. D. M., are the Nite Mine, which has produced millions of dollars' worth of gold, and other mines, patented and unpatented, which have produced other millions. That portion of the park comprised in about ten townships near its northern and eastern boundary line, lying within the county of Tuolumne, contains many mines of value, while the portion located in the county of Fresno includes the Minaret and North Fork (of the San Joaquin mining districts), known to be rich in mines of iron, lead, copper, and silver. These, with deposits of marble, granite, asbestos, and other minerals, disposed all over the park, only await favorable transportation facilities for practicable and profitable development. The third object of the act establishing the Yosemite Park is "the preservation from injury of . . . natural curiosities or wonders within said reservation, and their retention in their natural condition." The Yosemite Valley, one of the greatest natural wonders in the world, has been set apart as a reservation years ago. Four sections of land have also heretofore been set apart for the Mariposa Big Tree Grove of sequoias; for any scattered groups of sequoias growing in the park let there be ample territory reserved. Outside of these, this Yosemite Park does not contain any other natural wonders or curiosities than what are contained in any other mountain forest region.

A public park, the larger the better, near a large city, is a public benefit, and ought to be maintained at or near each centre of population.

These parks, being within their immediate vicinity, give the crowded people of the cities a chance to obtain fresh air, and to the poor an opportunity to enjoy a great many refinements of civilized life which they would be unable to procure otherwise. Public parks are therefore a benefit, physically, morally, and intellectually, to all those near enough to enjoy them.

But a park, or a system of parks, comprising territory embracing millions of acres, situated far away from any centre of population, and therefore inaccessible to the great majority of the people on account of the expense attached to get there, would in fact be only a park for the benefit of the rich and well-to-do, who could afford the travelling expenses.

Would such parks be within the scope and spirit of our institutions?

Having examined the three objects for which ostensibly these reservations were established, there remains another feature to be considered, namely, the status of the actual settlers on these reservations in their

rightful possessions acquired by homestead, pre-emption, or purchase under the laws of the United States.

A portion of township 4, south range 19 east, M. D. M., is one of the most fertile and has been one of the longest-settled districts of Mariposa County, simply because the first settlers naturally picked out the best places to settle on. On the Merced River are choice spots, which by reason of the mildness of their climatic conditions and the facilities for irrigation are unsurpassed for fruit-raising. The little valleys higher up, in the timber belt, have been proven to be equal to, if they do not surpass, any other lands in this great fruit-raising State of California for the raising of certain fruits and vegetables, such as apples, berries, potatoes, etc. The same conditions prevail in the reservation extending from Mariposa to Kern County. What is to become of these settlements? The act of October 1st, 1890, says: "That nothing in this act shall be construed as in anywise affecting . . . any *bona fide* entry of land made within the limits above described under any law of the United States prior to the approval of this act."

This was evidently inserted in order to kill off any intended job of unloading undesirable property on the Government.

But the first thing that the then Secretary of the Interior—Secretary Noble—does after having been intrusted with the management of the park is to report to Congress that it would be impracticable to maintain the Yosemite Park under government control with a multitude of private claims within its boundaries, and to recommend to Congress to take the necessary steps to extinguish these claims.

This may be a correct position, but it throws the door wide open for the accomplishment of the very jobs it was intended to guard against. But in either case the American settler, the pioneer, who in good faith came there to carve out for himself and family, under the laws of our country, a home from the wilderness, is the one who is injured. If his private claim is to be respected, then he is doomed to poverty, for a country that is condemned to preserve, instead of to use, its resources and to retain them in their natural condition is in a state of unmitigated stagnation, of living death.

If, on the other hand, Congress compels him to sell his home, he can hardly expect to receive for it anything like what his place would have been worth in course of time if the country is left to the natural development of its resources. And if he sells and leaves his home, is his place to go to wreck and ruin? and if not, by whom is it to be kept up—by tenants whose landlord is the United States? Is the curse of landlordism to be maintained by our own Government?

And the hundreds of little valleys that are situated within the two reservations, and are susceptible of cultivation and to become the homes of well-to-do families, are they to be kept in a state of wilderness under the pall of a government reservation? From their very nature they would not furnish large holdings, but they would become the homes of sturdy settlers, whose families, raised in the healthy climate of these forests and mountains, would in the future supply a great deal of nerve and sinew for the cities and hot valleys below.

If these premises are correct, is it right to maintain these vast tracts of mountain forests as parks and reservations, and to withhold their treasures and resources from the industrial life of the people?

AMONG THE BRAHMINS.

BY JOHN HAMILTON GILMOUR.

THE race characteristics of the Brahmins are distinctive and original and cannot fail to elicit the interest and admiration of the student of human nature. The writer has been afforded an excellent opportunity to observe and study them under normal and also extraordinary circumstances, having been among them for some length of time, and in the south during the famine of 1877–78, which surpassed in horror all that had preceded it during British occupancy.

It was the policy of the British government not to make public the fearful nature of the distress, but when alike districts were annihilated and the province of Massur lost over one million persons, it was decided to institute measures of relief. The district of Tinnevelly is accounted one of the richest in India. When Europeans were struggling for the supremacy in Hindostan, it was repeatedly captured and recaptured. For a time the Dutch were in possession of the province, but eventually were ignominiously driven out by the British. It is a prize worth striving for. In the hills to the southeast every known spice grows in luxuriance. Pineapples with their thorny spikes fret the face of the country. The heavily wooded mountains have been cleared for the coffee and spices, and Englishmen have rapidly acquired huge fortunes through this enterprise. The sea is even more gracious. The great pearl fishery beds lie between Tuticorin and the island of Ceylon, and finds of wonderful gems are frequently made. Between Tinnevelly and the sea the country is flat and uninteresting, and there is no natural irrigation. This part is, however, the granary of the district. It was here that no rain had fallen for three years, and the suffering people having eaten up their reserve supplies, found no alternative but to calmly await death. The local government was powerless. Mr. Pennington, the collector, poured into the distressed taluks all the grain he could conveniently lay hands on, but it was a mere drop in the ocean. These taluks were most densely populated—often five hundred to the square mile. Then the famishing wretches began to leave their villages and invaded Tinnevelly itself. Horror succeeded horror. European women fainted at the sight of their wretchedness. The starvelings followed the horses of the white men and picked from the manure the undigested grain. Mothers showed their babies hanging to milkless breasts, and forever went up that cry "Swami, swami." It was not an appeal to God. It was to the white men they cried for help.

Active and resourceful, Mr. Pennington, with but slender means at his command, commenced a series of relief works, feeling confident that the supreme government would come to the people's rescue. After several thousand lives were lost the supreme government did offer relief in the wickedest and most wasteful manner possible. In the centre of the chief taluk a relief camp was formed, and into this camp the people were driven. Money was given those villages in which there was left some grain. At Ootipadaram, the chief village of the taluk of that name, a relief camp was formed, and at one time no less than 10,000 persons were daily being fed at the public expense. Besides this camp there were smaller ones at

Sattur and Virudupetti which probably sheltered 15,000 between them. The road to the camp from the railway station at Maniachi was literally festooned with corpses in all stages of decomposition. The air was heavy with pollution. Deadly fevers raged and cholera showed its horrible front.

The first official care was to dispose of the dead, and for that purpose long trenches were dug. Sometimes the deaths amounted to a thousand a day, and despite this awful mortality there seemed no diminution in the camp number.

This panic was felt equally by rich and poor. But so full of pride was the Brahmin that he preferred to die with his family, shut up in his house, rather than mingle with a horde of pariahs in the common camp. They were even too proud to ask for monetary assistance, but a procession of Brahmin women, tottering with weakness, would often go to the temple and, flinging themselves on the ground, pray for rain. Whenever the white man did anything for them his liberality was praised, and in proof of the esteem in which his gifts were held one-half was often given as an offering to the God.

The name Brahmin is synonymous with cleanliness. Not only are the Brahmins scrupulous in the attention they pay their bodies, but are equally careful with their belongings. It would be an impossibility to find a dirty Brahmin or a dirty Brahminical quarter.

Cleanliness is not a matter of choice; it is a religion which must be rigidly observed. Some of the ideas of cleanliness are very particular. For instance, no Brahmin woman permits hair upon her body. Each single hair must be plucked out, and the parts rubbed with saffron. After she touches anything she must bathe, and she refuses her husband entrance to her house if he does not completely wash and thoroughly purify himself after contact with Europeans. She is equally strict with her children who attend the public school, being harassed by the fear that they will inadvertently touch a Sudra. She will allow no dogs near her domicile, nor fowls, for they are unclean. Her table is of the simplest. Nothing that grows under the ground will the Brahmin eat, only that which can be gathered from above. Potatoes are unclean; so are beets and carrots. But corn, which has no contact with the soil, can be used. The Brahmin never touches with his lips any utensil. When he drinks milk or water he pours the liquid into his mouth without letting the vessel come near his lips, and after use the cup is thoroughly cleaned.

The Brahmin is extremely careful that nothing shall contaminate his person. When he buys wood from a pariah, the unfortunate seller will have to lay the bundle in the middle of the road and retreat from it a few rods, keeping his hand well in his mouth so as to prevent the possibility of his breath reaching the Brahmin's sacred person.

The Brahmins are disposed to be friendly to Englishmen, for there is a tradition current among them that certain sages visit England and create white men, calling them Gundanas, or God-fearing men, but the English soon outlived the Brahmin's respect by employing pariahs as servants. Though we diligently inquired who made the pariahs we never could learn. While talking to a white person they have a habit of catching the holy thread (a string worn by Brahmins around the body and hanging from the right shoulder) and showing the back of the hand. On the conclusion of the conversation the palm is shown. This is as a charm against the white person's meat-eating proclivities.

Brahmins rich and poor are equally particular. To be a Brahmin is to be a god. There are two Brahmin sects, Vishnu and Shiva, the Preserver and Destroyer. All Brahmins worship

Bruma, the Creator, and believe they sprang from his face. The descendants of Vishnu, who preserved the world from the attacks of Shiva and the latter's descendants, though equal each in the other's sight as God-descended, have nothing in common. They cannot intermarry nor eat together, and their quarters are widely separate. Their dresses are totally distinct, and they each wear caste marks. The Vishnu men have three radiating streaks upon their foreheads of brown and yellow, the lines meeting between the eyebrows. The two outer lines are brown, the inner yellow. The Shivaite adorns the centre of his forehead with a dot of sandalwood grease. The women too are differently costumed. The Shiva woman's dress is the prettier of the two, for the garb of the Vishnu woman is almost too scant for grace, being worn tight across her knees, and a Shiva has a loose fold hanging on the side of her right leg below the knee. A Telugu woman, a Brahmin north of Madras, has a loose fold hanging in front of her. Girls who have not attained the age of puberty wear a simple petticoat, while a mature woman wears an undergarment. So it appears that the dhoti form of dress covers another dress. Only Brahmin women are allowed to wear the dhoti or man-like costume, all Sudra women and others of low caste being obliged to wear the petticoat.

The Brahmin woman is also restricted as to color. There is only one kind of dress she can buy. It must be light brown with a gold thread running through it. It is chaste, rich and silky, and consists of a single sheet. She takes this and winds it about her body, and then twines it between her legs. As I have said, the Vishnu woman draws it tight across her knees, showing her limb from the knee down, while the Shiva woman's dress is graceful, voluminous, and coquettish. The Brahmin women are often very beautiful. Their complexions are pale brown, their hair black, and their eyes large and ravishingly tender in expression; they are fond of jewelry and some of them have gems which queens would be glad to possess. They often wear a thin gold plate in their breast, and those who are sufficiently opulent display magnificent head-pieces.

The widow's lot among Brahmins is not cheerful. The Brahminical law has ordained that widows must wear white and keep their head shaved, and they must wear a cloth over the head, as it must always be covered. The object of keeping the widow's head shaved is to detract from her personal appearance, for the Brahmins have no intention of having attractive widows in their midst. It is the custom among rich Brahmins to employ widows and the relatives of poor Brahmins as their domestics, but, to their honor be it said, their caste is most rigidly maintained.

Polygamy is prevented, but only in those cases when a woman is barren for the space of ten years, or if she only has female children, and in some cases when it is impossible for her to agree with her husband.

The Brahmin is an autocrat in his household, and some of his regulations are praiseworthy. Widows and boys who are bachelors are not permitted the use of snuff; there is no definite age given when the latter can take it, but they must be of mature years. Snuff supplies the want of hubble-bubble, the few who do smoke being Mohammedans.

Despite their strangely superstitious character and their tenacity in clinging to past traditions, the Brahmins are of the world worldly. Generations of intelligent ancestors have produced marvellously clever men, their physical appearance showing them to be men of birth and culture; they are above the middle height and are slenderly proportioned; their faces are oval and extremely hand-

some, their nose aquiline, their eyes large, and their complexion brown; their hands are perfect, the fingers long and tapering, and small in body. They are self-possessed, philosophical, and studious, and seize with avidity the chance to perfect themselves in the English language. The school at Ettiapuram is a surprise to the visitor. There small girls will be found in attendance, studying diligently the English language.

The Brahmins speak Shakesperean English, and some of their sentences are marvellously constructed. They are close students of the great poet, and Brahmin boys of twelve to fourteen years of age often know their Shakespeare better than do many Englishmen.

The superior intelligence of the Brahmins naturally leads them to seize the alluring prize offered by entrance to the government service, and the lower branches of the judiciary is filled with them; they have grotesque ideas of justice.

In the Ootipadaram taluk a Brahmin and a Sudra were on trial for the same offence; the Sudra was sentenced to be whipped, the Brahmin to a slight fine.

"Where is the justice in that?" was asked of the Tehsildar.

"My dear sir," he replied in his suavest manner, "you know the Brahmin is so brave, so superior, that you cannot inflict punishment on his body, so you have to punish him through his purse; while the miserable Sudra is such a coward that he dreads a whipping. We have to find punishments which are the most disliked."

It was of course an audacious lie, for the Brahmin would rather have suffered death than the ignominy of a flogging. Whenever there is a dispute between a Brahmin and a Sudra which has to be carried into court, no justice is done the latter. Thus it is that the great majority of the Hindoos prefer the law to be administered by the whites, for they are then certain that there will be no partiality shown. The Brahmins are clannish; for centuries they have been India's rulers; for centuries they have been regarded as deities. Their edicts were more to be feared than those of a Maharajah, for the Maharajah was subject to change, a despot of short life, while the Brahmin's despotism would continue forever. When the English seized upon India in the most approved freebooter fashion, the Brahmin saw the end of his sway approaching. There was but one way to continue his influence. If he wished still to be a pioneer in the land of his forefathers, he must bow to English demands, learn their customs as far as was compatible with his conscience, and above all he must win the intruders' confidence. The Hindoo is naturally subtle, so the English found in the Brahmin a coadjutor, the Brahmin improving all of his opportunities to learn the craft of his conqueror. He studied English, easily learned law, passed examinations, and began to flood the government service. From being a priesthood with power to morally damn, the Brahmin has become doubly dangerous to the common herd. Now his power is political as well as religious. He has "the ear of the Sikar," say the natives, "and what is the use to contend against the Brahmin?" I am convinced that more injustice is dealt out the poor *raiat* by the Brahmin petty judge of a taluk in one year than will be by every English judge in all India for one hundred years.

The Brahmin, whether he be a Tyer (Vishnuite) or a Tengar (Shivaite), is careful not to clash with the authorities. He never attempts to bring about an open rupture. The Brahmin is rather a peace-loving individual, though of course a Vishnu has a hatred for a Shiva. Perhaps one cause, or at least an aggravation, of the enmity is the curious fact that the followers of Shiva are handsomer than those of Vishnu. In one school

of about fifty, where there was an equal proportion of both sects, there was but one passably good-looking Vishnuite, while all the Shivaites were fine-looking. Another superiority of the pure Brahmin is, he has better capacities for learning than the Sudra or the lower castes.

The Brahmins, especially the Shivaites, are extremely sociable. They meet before each other's homes at night and hold quaint concerts. Few lands know such lovely evenings. The air is perfectly still and the incense of wetted earth fills the atmosphere. The dark copses are ablaze with tiny glittering lights which never seem to rest. No sounds disturb the pleasant cool; it is restful, soul-satisfying. Suddenly the quiet is broken by the clear tenor voice of a young Hindoo, and the refrain is caught up by other voices, fresh and pure, till the very woods and water breathe music and are stirred to poetic emotions.

Their life is purely pastoral, and the Brahmins, before the lust of governmental power seizes them, are the best fellows in the world. They have a peculiar vocabulary, as the following will show. They call the wasp, *vidégar*, or priest; the grasshopper, a soldier; a large worm, a species of glow-worm, a cowherd or milkman; mosquitoes and fleas, servants; bug, a doctor; butterfly, a Brahmin woman; the horsefly, a dog; and the bee, a Brahmin.

It was explained to me that the bee was called a Brahmin for its habits of exclusiveness, the wasp a priest because of its love for getting others into trouble. The rest may be easily understood in their application.

Tinnevelly is the home of the cocoanut palm. This palm is the Madrassi's all in all. He eats the fruit and drinks the milk, from its trunk he makes a strong cordage, and when old he saws it down and its wood is valuable to the carpenter. For the leaves he has a multiplicity of uses. They can be employed for roofs and also for school-books. They are split at the crease, and two holes are bored in each end, through which is passed a string and a school-book is fashioned. These quaint leaves are also used as writing tablets, a sharp steel stylus being used to write upon them. The Brahmins are very fond of this tree, and no house seems to be complete unless one or two face its front. The verandas of these domiciles are built up from one to four feet from the ground and are painted red and white. These artistic buildings and the avenues of palm-trees render a Brahmin village eminently picturesque, and the exquisite cleanliness makes a visit to them very pleasurable.

An atmosphere of romanticism seems to hover about this stately people and their homes, and the world can produce few races braver or more stoical under misfortune and in whom exists a pride of caste so strong that it enables them to face calamity with the equanimity of a philosopher.

THE SOURCE OF REFORM.

BY R. H. McDONALD, JR.

"NO great political improvement, no great reform, legislative or administrative," says Buckle, "was ever originated in any country by its rulers." This statement is very broad and hardly consistent with the exact truth. We are unable to determine what the author regarded as great improvements or reforms, but that rulers have originated that which is of value cannot be doubted. Solon and Lycurgus were rulers, and they gave improved laws and institutions to their respective countries, or framed advanced systems and procured for them popular assent. Marcus Aurelius is credited with the origination and enforcement of reforms in the darkest period of the Roman Empire. Justinian caused the Roman laws to be revised and codified, and his Code, Pandects, and Institutes were decided improvements in Roman jurisprudence, so much so that they constitute the basis of the civil-law system which prevails in some of the most civilized nations of the present time. Bonaparte caused the laws of France to be codified and improved, and the Code Napoleon with no very great modification is the basis of French jurisprudence to this day. Since Buckle died the Czar of Russia has abolished serfdom, and so far as we know this measure of reform and humanity originated with him. Many instances may be cited where improvements or reforms of greater or less importance proceeded from the brains of rulers whose powers were even absolute.

The author quoted in tracing the progress of civilization necessarily began with the earliest ages of which we have historical information. His route was through the night of the darkest period of the world. He had to deal with peoples sunk in ignorance and superstition and whose rulers were temporal or ecclesiastical despots. His researches were among the records of absolute and irresponsible monarchies and not among the archives of an intelligent and free people. When he wrote there was little republicanism in Europe and when France was imperialistic. Its experiences under the first republic were not assuring, and England was monarchical and aristocratical. What he said is more nearly true in monarchies than in popular governments. He was little acquainted with the history of the United States apparently, for he classes her as least among the four most civilized nations. He places England first, France second, Germany third, and the United States fourth. Hereditary rulers are not interested in reforms that improve the condition and opportunities of the masses, for they detract from their privileges and powers. Louis Quatorze said, "I am the state," which is expressive of the feeling that pervades the minds of all monarchs to a greater or less extent. While the statement quoted is not strictly accurate, it suggests reflections touching the sources of progress and the duties and power of a free people.

It is true that improvements and reforms usually proceed from the conceptions and efforts of men in private stations, and that powers have been wrested from kings and privileged classes by the people. Postal reform in England resulted from the labors of Sir Rowland Hill, and prison reform from those of John Howard. Slavery in British dependencies was abolished at the command of a public sentiment created by the

eloquence of Wilberforce, and the American mind was aroused to opposition to our own slavery by the self-abnegating efforts of Garrison, Phillips, Thoreau, Parker, and a few other philanthropic men. Magna Charta was wrested from King John by the sturdy barons of England, and since Buckle wrote the emperors of Austria and Germany have conceded more liberal constitutions, which enlarge the rights of the people as to representation in the parliaments of those countries. These concessions were not voluntary, but in a measure enforced by popular sentiment. It may be said that public opinion has become the most potential influence known among men. It is an incident to the growth of civilization. Before civilization became a recognized fact there was no such thing as public opinion, for it can have no existence where there is the absence of intelligence and of independent thought. Through the progress of civilization governments and social institutions have been revolutionized either radically or partially. We have seen advancement in nearly all the countries of Europe, and that advance has been in proportion to the intelligence and virtue of the people. That there are a few learned and advanced thinkers in a nation does not make it civilized in the broadest and highest sense. Knowledge of physical and mental laws and moral integrity must be possessed by the masses, and while a few men of observation and thought may have great knowledge, their achievements are comparatively inconsequential so far as the public good is concerned unless the masses make corresponding progress. Improvements and reforms—and it is to be lamented—are slower in governments than in almost any department of human affairs. Absolutists do not seek to introduce reforms because they are hostile to their interests, and in popular governments rulers will not proceed faster than the people require of them. They may originate improvements in ordinary legislation, in methods and details of administration, and for the preservation of peace and order, but there need be no expectation that they will introduce material innovations until they are sure of popular approval. Those who rule by the right of heredity do not think of the public welfare, and rulers in republics do not ordinarily act in advance of public sentiment.

Buckle is one of those authors who is of opinion that governments and ecclesiasticism have not only retarded progress, but have been the causes of innumerable and grievous woes, and but for the independent thinkers, littérateurs, publicists, economists, and scientists the world would still be in the maelstrom of ignorance and vice. His investigations were such as to lead to extreme conclusions and cause him to draw pictures extravagantly dark. We who live in this enlightened and progressive country are naturally less pessimistic in our views than those who have existed in and have studied less favorable conditions, but by study of our own history we clearly perceive that rapid and substantial progress in government and institutions has not taken place except at the behest of the people. There is a percentage of delinquency and dishonesty among officials corresponding to the percentage of the same qualities among the masses. The bulk of officials are at least passably faithful and honest, but the progressives are few as compared with the whole, and those who have the courage to advance independently are fewer still. Our presidents and governors frequently recommend changes more or less radical, but not until they have sounded public sentiment. The same is true of legislators and others who conduct administrative branches of the government. Political leaders frame platforms with a view of impressing the popular mind, but never of such character as to antagonize what they suppose to be the popular feeling.

Public opinion is the chronometer with which politicians set their clocks, and hence in this country it is the regulator of official conduct and the chief source of improvement and reform in our civil and political institutions. Those who want change may petition the law-making and administrative powers, not so much in the expectation of gaining favorable action as in arousing the public mind to the subject. Reformers first address the people with a view to securing their indorsement, for they know that when that is accomplished all is done.

If what has been said be true, then a tremendous responsibility rests upon the masses. The character of government and institutions will be as they make it, for in this free country they may have absolute and final control. The people are as liable to make mistakes in their aggregate capacity as individuals are in their separate actions, but mistakes ought not to be repeated. The conduct of rulers will be as the people would have it, if they will but make their wishes known. They are not able to control where their powers are abridged, as in empires and kingdoms; but in republics, more especially in this, their will is law, and progress in whatever field must in the main proceed from and through them.

AN OLD BOOK ABOUT POETRY.

BY JOHN VANCE CHENEY.

I.

SOME twelve months after the preparation of the papers, "The Old Notion of Poetry" and "Who are the Great Poets?"—the opening papers of the first series of these essays—I became the happy possessor of a volume to which I would call general attention. The title of the volume is, "Lectures on the Sacred Poetry of the Hebrews. Translated from the Latin of the late Right Rev. Robert Lowth, D.D., F.R.S., Prælector of poetry in the Univ. of Oxford, and Lord Bishop of London: by G. Gregory, F.A.S." An American edition was brought out by Calvin E. Stowe, Andover, 1829. A writer in the *North American Review* (v. 31, 1830), commenting on the fact that this edition was presented with an apology, uses these words:

> "It will hereafter, perhaps, be regarded as an anomaly in the history of the human intellect, that the poems of Homer should for ages have attracted the attention of the profoundest minds, and been made for a time almost the exclusive object of criticism in all its forms, and of associated inquiry in all its ten thousand wanderings, and yet that the Hebrew writings of the inspired volume, though equally before the eye and in the memory of men, should have been long passed by with such total absence of everything like an attentive study, as to have left the great body of the most learned critics completely ignorant of their true nature, and gravely mistaking their poetry for prose."

This state of things has been regarded by the writer as an anomaly since the days of early youth; and he is able to account for it only on

the ground that not one in a thousand, even among scholars, has a just conception of the character, of the office, and of the power of poetry. Nothing is plainer than that the secret of power of the Old Testament lies largely in its poetry, and yet only recently has it begun to be suspected, save in isolated instances, that there are so much as wandering strains of poetry in the matchless and eternal old Hebrew songs and prophecies. A hint of the confusion and loss consequent on this blindness is given by the reviewer before quoted:

"The evils which have arisen from a wrong conception of the nature of so great a portion of the inspired writings have been multiplied. They have been the occasion of almost all the objections of infidels and the cavils of irreligious men. There cannot be a doubt that just in proportion as the Hebrew Scriptures, especially the poetical parts of them, are keenly and critically scrutinized, such objections and such cavils will utterly fade from the mind."

I believe this; hence my steadfast preference for Matthew Arnold as counsel in the case of poetry. He, and he almost alone, of late years, has had the discernment and the courage to declare that the "best of religion is its poetry;" and to him more than to any other we owe the little right-seeing that we begin to have of the Old Scriptures, the straight sight which makes a stand against doubt, despondency, and despair; the wise, just sight which takes these writings as they were meant and for what they are—the profoundest criticisms of life, under the dictates of poetic beauty and poetic truth. The ancient Hebrews had the language, the land, and the life to push the imagination to its highest; of which fact we need no further proof than that, after the waste and change of centuries, still theirs are the writings men of to-day—men who catch but a fraction of their beauty and majesty—name reverently the Sacred Book, The Book.

The views of Bishop Lowth concerning Hebrew poetry support so strongly, point by point, my own notions, perhaps already too familiar to those honoring me with a hearing, that the temptation is strong to follow him in this particular path; but, for the present, I have chosen rather to quote him concerning the first great principles of all poetry as they have come down to us on the long authentic voice of the ages. First, as to the point so long blown round and round by the twisting winds of metaphysics, whirling up new difficulty with each circuit:

"Poetry is commonly understood to have two objects in view, namely, advantage and pleasure, or rather an union of both. I wish those who have furnished us with this definition had rather proposed utility as its ultimate object, and pleasure as the means by which that end may be effectually accomplished. The philosopher and the poet, indeed, seem principally to differ in the means by which they pursue the same end. Each sustains the character of a preceptor, which the one is thought best to support, if he teach with accuracy, with subtlety, and with perspicuity; the other, with splendor, harmony, and elegance. The one makes his appeal to reason only, independent of the passions; the other addresses the reason in such a manner as even to engage the passions on his side. The one proceeds to virtue and truth by the nearest and most compendious ways; the other leads to the same point through certain deflections and deviations, by a winding but pleasanter path. It is the part of the former so to describe and explain these objects that we must necessarily become acquainted with them; it is the part of the latter so to dress and adorn them that of our own accord we must love and embrace them.

"I therefore lay it down as a fundamental maxim that poetry is useful, chiefly because it is agreeable; and should I, as we are apt to do, attribute too much to my favorite occupation, I trust Philosophy will forgive me when I add that the writings of the poet are more useful than those of the philosopher, inasmuch as they are more agreeable" (p. 4).

Can anything be plainer or simpler? Theology, bigotry, superstition—these render some excuse for the failure to find the poetry in The Book; but what apology is to be made for the failure to find the poetry in the books?

Let it not be thought, because this author was lord bishop, that the Hebrew poetry is all in all to him. The whole gamut of antiquity has been played in his ears—the classic learning, eloquence, and song. A few lines farther on—I take the points in the order that I find them—is asked a question that should be no more readily put than answered; and yet there is no end of hesitation and stammering when it comes, for example, to certain lines of Browning's:

"For what is a poet, destitute of harmony, of grace, and of all that conduces to allurement and delight? or how shall we derive advantage or improvement from an author whom no man of taste can endure to read? The reason, therefore, why Poetry is so studious to embellish her precepts with a certain inviting sweetness, and, as it were,

—'tincture them with the honey of the Muses,'

is plainly by such seasoning to conciliate favor to her doctrine, as is the practice of even physicians, who temper with pleasant flavors their least agreeable medicines:

'Thus, the sick infant's taste disguis'd to meet,
They tinge the vessel's brim with juices sweet:
The bitter draught his willing lip receives;
He drinks deceiv'd, and so deceiv'd he lives;'

as Lucretius expresses himself in illustration of his own design, as well as that of poetry in general" (pp. 5, 6).

And now, for a moment, think of the multitudinous definitions and decipherings, divisions and subdivisions—all the painful processes of inquiry, saddled on some one kind or style of poetry, we will say the heroic; what is the whole of it worth if this much be not settled first?

"But if it be manifest, even in authors who directly profess improvement and advantage, that those will most efficaciously instruct who afford most entertainment, the same will be still more apparent in those who, dissembling the intention of instruction, exhibit only the blandishments of pleasure; and while they treat one of the most important things, of all the principles of moral action, all the offices of life, yet laying aside the severity of the preceptor, adduce at once all the decorations of elegance and all the attractions of amusement; who display, as in a picture, the actions, the manners, the pursuits and passions of men; and by the force of imitation and fancy, by the harmony of numbers, by the taste and variety of imagery, captivate the affections of the reader, and imperceptibly, or perhaps reluctantly, impel him to the pursuit of virtue. Such is the real purpose of heroic poetry; such is the noble effect produced by the perusal of Homer. And who so thoughtless, or so callous, as not to feel incredible pleasure in that most agreeable occupation? who is not moved, astonished, enraptured, by the inspiration of that most sublime genius? who so inanimate as not to see, not to feel inscribed, or as it were imprinted upon his heart, his most excellent maxims concerning human life and manners? From philosophy a few cold precepts may be deduced; in history, some dull and spiritless examples of manners may be found: here we have the energetic voice of Virtue herself, here we behold her animated form. Poetry addresses her precepts not to the reason alone; she calls the passions to her aid; she not only exhibits examples, but infixes them in the mind. She softens the wax with her peculiar ardor, and renders it more plastic to the artist's hand. Thus does Horace most truly and most justly apply this commendation to the poets:

'What's fair, and false, and right, these bards describe,
Better and plainer than the Stoic tribe.'

Plainer or more completely, because they do not perplex their disciples with the dry details of parts and definitions, but so perfectly and so accurately delineate, by examples of every kind, the forms of the human passions and habits, the principles of social and civilized life, that he who from the schools of philosophy should turn to the representations of Homer would feel himself transported from a narrow and intricate path to an extensive and flourishing field:—better because the poet teaches not by maxims and precepts, and in the dull sententious form; but by the harmony of verse, by the beauty of imagery, by the ingenuity of the fable, by the exactness of imitation, he allures and interests the mind of the reader, he fashions it to habits of virtue, and in a manner informs it with the spirit of integrity itself" (pp. 6, 7).

If we are to form a just notion of what poetry is through the instrumentality of critics, this is the order of them to which our inquiries must be addressed.

I hold Keats' position, "Poetry is the supreme of power," to be impregnable. The words sound strange enough amid the tinkle of much matter dignified with the title of criticism; but in the presence of this old

bishop and the good old minds behind him, it is the inevitable conclusion. It stares one in the face. There is not a single "if" to trip us, not so much as a "but" to stumble over. There is no trouble, provided we turn to solid counsellors. Like the solicitous bishop of days by-gone, we must be content only with the best intelligence.

"Since the sensible world," says Bacon, "is in dignity inferior to the rational soul, poetry seems to endow human nature with that which lies beyond the power of history, and to gratify the mind with at least the shadow of things where the substance cannot be had. For, if the matter be properly considered, an argument may be drawn from poetry, and that a superior dignity in things, a more perfect order, and a more beautiful variety delights the soul of man, than is found in nature since the fall. As, therefore, the actions and events which are the subject of true history are not of sufficient amplitude to content the mind of man; poetry is at hand, and invents actions of a more heroic nature. Because true history reports the success of events not proportionable to desert, or according to the virtue or vice that has been displayed in them; poetry corrects this, and represents events and fortunes according to justice and merit. Because true history, from the obvious similarity of actions, and the satiety which this circumstance must occasion, frequently creates a distaste in the mind; poetry cheers and refreshes it, exhibiting things uncommon, varied, and full of vicissitude. As poetry, therefore, contributes not only to pleasure, but to magnanimity and good morals, it is deservedly supposed to participate in some measure of Divine inspiration; since it raises the mind, and fills it with sublime ideas, by proportioning the appearances of things to the desires of the mind, and not submitting the mind to things, like reason and history" (p. 9).

Had Donnelly, instead of playing the zany over Shakespeare and Bacon, striving to put one man where God put another, spent his time crying this passage up and down the streets, he would have displayed originality meriting something better than bread and water and shackles. The most of us have read this passage at one time or another, but we have not taken it and other great sayings that belong with it to our business and bosoms.

As in heroic poetry, so in tragedy, there is no escaping the conclusion that poetry is superior to philosophy as well as to history.

"But if from the Heroic we turn to the Tragic Muse, to which Aristotle indeed assigns the preference, because of the true and perfect imitation, we shall yet more clearly evince the superiority of poetry over philosophy, on the principle of its being more agreeable. Tragedy is, in truth, no other than philosophy introduced upon the stage, retaining all its natural properties, remitting nothing of its native gravity, but assisted and embellished by other favoring circumstances. What point, for instance, of moral discipline have the tragic writers of Greece left untouched or unadorned? What duty of life, what principle of political economy, what motive or precept for the government of the passions, what commendation of virtue is there which they have not treated of with fulness, variety, and learning? The morals of Æschylus (not only a poet, but a Pythagorean) will ever be admired. Nor were Sophocles or Euripides less illustrious for the reputation of wisdom; the latter of whom was the disciple of Socrates and Anaxagoras, and was known among his friends by the title of the dramatic philosopher. In these authors, surely, the allurements of poetry afforded some accession to the empire of philosophy; nor indeed has any man arrived at the summit of poetic fame who did not previously lay the foundation of his art in true philosophy.

"Should it be objected that some have been eminent in this walk of poetry who never studied in the schools of the philosophers nor enjoyed the advantages of an education above the common herd of mankind, I answer that I am not contending about the vulgar opinion, or concerning the meaning of a word. The man who, by the force of genius and observation, has arrived at a perfect knowledge of mankind; who has acquainted himself with the natural powers of the human mind and the causes by which the passions are excited and repressed; who not only in words can explain, but can delineate to the senses, every emotion of the soul; who can excite, can temper and regulate the passions—such a man, though he may not have acquired erudition by the common methods, I esteem a true philosopher. The passion of jealousy, its causes, circumstances, its progress and effects, I hold to be more accurately, more copiously, more satisfactorily described in one of the dramas of Shakespeare than in all the disputations of the schools of philosophy.

"Now, if tragedy be of so truly a philosophical nature; and if, to all the force and

gravity of wisdom, it add graces and allurements peculiarly its own—the harmony of verse, the contrivance of the fable, the excellence of imitation, the truth of action; shall we not say that philosophy must yield to poetry in point of utility? or shall we not rather say that the former is greatly indebted to the latter, of whose assistance and recommendation it makes so advantageous a use, in order to attain its particular purpose, utility or improvement?" (pp. 7, 8).

Though I have gone over this ground before in my inquiry into the character and office of poetry, it is quite to the purpose to tread it once more; and it is fortifying to find the wise old bishop at my side every inch of the way. Of course, he will press on beyond most travellers of to-day when it comes to distinguishing between the inspiration of Shakespeare and that of the author of "Job," but so far as we can accompany him his words are certainly worth whole shelves of modern books on the subject of poetry.

"But, after all, we shall think more humbly of poetry than it deserves, unless we direct our attention to that quarter where its importance is most eminently conspicuous; unless we contemplate it as employed on sacred subjects and in subservience to religion. This indeed appears to have been the original office and destination of poetry; and this it still so happily performs that in all other cases it seems out of character, as if intended for this purpose alone. In other instances poetry appears to want the assistance of art, but in this to shine forth with all its natural splendor, or rather to be animated by that inspiration which, on other occasions, is spoken of without being felt. These observations are remarkably exemplified in the Hebrew poetry, than which the human mind can conceive nothing more elevated, more beautiful, or more elegant; in which the almost ineffable sublimity of the subject is fully equalled by the energy of the language and the dignity of the style. And it is worthy observation that as some of these writings exceed in antiquity the fabulous ages of Greece, in sublimity they are superior to the most finished productions of that polished people. Thus, if the actual origin of poetry be inquired after, it must of necessity be referred to religion; and since it appears to be an art derived from nature alone, peculiar to no age or nation, and only at an advanced period of society conformed to rule and method, it must be wholly attributed to the more violent affections of the heart, the nature of which is to express themselves in an animated and lofty tone, with a vehemence of expression far remote from vulgar use" (p. 18).

Whatever our special religious belief, we can agree with this, and in the agreement we shall go a long way toward settling contention and confusion, toward preventing waste of time over commentators as injurious as ingenious, as delusive as voluminous.

Nor shall we find this critic of great poetry scorning the small poetry. So thoroughly is he at home in the art that he can unbend with all the grace and fervor of Jean Paul to dwell fondly on the precious lyrics of slender theme, the little waftings of fancy, the fitful breaths of bird-like melody, that charm in moments of mirth or idleness.

"Not entirely to omit the lighter kinds of poetry, many will think that we allow them full enough when we suppose their utility to consist in the entertainment which they afford. Nor is this altogether to be despised if it be considered that this entertainment, this levity itself, affords relaxation to the mind when wearied with laborious investigation of truth; that it unbends the understanding after intense application; restores it when debilitated; and refreshes it, even by an interchange and variety of study. In this we are countenanced by the example and authority of the greatest men of Greece, by that of Solon, Plato, and Aristotle; among the Romans, by that of Scipio and Lælius, Julius and Augustus Cesar, Varro and Brutus, who filled up the intervals of their more important engagements, their severer studies, with the agreeableness and hilarity of this poetical talent. Nature indeed seems in this most wisely to have consulted for us, who, while she impels us to the knowledge of truth, which is frequently remote, and only to be prosecuted with indefatigable industry, has provided also these pleasing recreations as a refuge to the mind, in which it might occasionally shelter itself, and find an agreeable relief from languor and anxiety" (p. 15).

And the critic that so finds can go farther; can find that the practice as well as the reading of poetry is essential as a means of culture.

"But there is yet a further advantage to be derived from these studies, which ought not to be neglected; for, besides possessing in reserve a certain solace of your labors, from the same repository you will also be supplied with many of the brightest ornaments of literature. The first object is, indeed, to perceive and comprehend clearly the reasons, principles and relations of things; the next is, to be able to explain your conceptions, not only with perspicuity, but with a degree of elegance. For in this respect we are all of us in some measure fastidious. We are seldom contented with a jejune and naked exposition even of the most serious subjects; some of the seasonings of art, some ornaments of style, some splendor of diction, are of necessity to be adopted; even some regard is due to the harmony of numbers and to the gratification of the ear. In all these respects, though I grant that the language of poetry differs very widely from that of all other kinds of composition, yet he who has bestowed some time and attention on the perusal and imitation of the poets will, I am persuaded, find his understanding exercised and improved as it were in this Palæstra, the vigor and activity of his imagination increased, and even his manner of expression to have insensibly acquired a tinge from this elegant intercourse. Thus we observe in persons who have been taught to dance a certain indescribable grace and manner; though they do not form their common gesture and gait by any certain rules, yet there results from that exercise a degree of elegance which accompanies those who have been proficients in it even when they have relinquished the practice. Nor is it the least improbable that both Cesar and Tully (the one the most elegant, the other the most eloquent of the Romans) might have derived considerable assistance from the cultivation of this branch of polite literature, since it is well known that both of them were addicted to the reading of poetry, and even exercised in the composition of it. This too is so apparent in the writings of Plato that he is thought not only to have erred in his judgment, but to have acted an ungrateful part, when he excluded from his imaginary commonwealth that art to which he was so much indebted for the splendor and elegance of his genius, from whose fountains he had derived that soft, copious, and harmonious style for which he is so justly admired" (pp. 15–17).

Blessed old bishop! There you have it, poetry serviceable even as a sort of Delsarte practice for the mind and heart.

Verily the Oxford boys one hundred and fifty years ago had a decided advantage over their successors of to-day. Were the present time as favorable to poetry as theirs we should hear not a word, for instance, of the warfare between poetry and science (which, by the bye, the enlightened Tyndall terms her "younger sister"); not a syllable would be lisped on such a topic as "Is Verse in Danger?" The good bishop would as soon have thought of doubting the existence of his soul and the High Power on which it leaned as of questioning the imperishability of song; song, which has taught us the most we know of these.

With this peep at a forgotten volume I commend it most heartily to young and old, to all ranks and classes from shoeblack to scholar; this for a better understanding of the Scriptures and for advancement in knowledge concerning the ruling power, the one force always first, in matters great and small, sacred and profane.

II.

Postscript.

Bishop Lowth began lecturing in 1741, one hundred and fifty-eight years after Sidney wrote his "Defence of Poesy." A few quotations from Sidney will show, without argument, that the old notion was transmitted intact, and so held till the middle of the eighteenth century. "This heart-ravishing knowledge" is one of his expressions; another is, "That unspeakable and everlasting beauty to be seen by the eyes of the mind." The purpose of poetry is "to teach and delight;" poetry is the "sweet food of sweetly uttered knowledge." The poet "doth not only show the way, but giveth so sweet a prospect into the way as will entice any man to enter into it." And so we might go on plucking flowers throughout this immortal essay, flowers every color and breath of which are instinct with the traditions for the authority of which I contend.

Eighty years later, in Shelley's "Defense of Poetry," we find the old notion getting dim. After all, it is more a seeming than a reality with Shelley, for we soon catch him crossing his own path. If Shelley be right when he says, "The distinction between poets and prose writers is a vulgar error," Sidney's exposition is without meaning. Really, Shelley does not intend the direct and full contrary; but should he, or another, or a thousand others, intend the like, we are safe in holding to the firm phrase of Sidney: "that same exquisite observance of number and measure in words, and that high-flying liberty of conceit proper to the poet." Taken in a half-sense, there is truth in Shelley's blunt statement, and in Sidney's "there have been many most excellent poets that never versified;" but taken in the whole sense, both asseverations are misleading. We cannot have poetry proper without the poet's vision *and* method *and* music—

> . . . "the numbers which could call
> The stones into the Theban wall."

Shelley would have it that the aim of the poet is, not to "teach and delight," but to delight. He says:

> "Those in whom the poetical faculty, though great, is less intense, as Euripides, Lucan, Tasso, Spenser, have frequently affected a moral aim, and the effect of their poetry is diminished in exact proportion to the degree in which they compel us to advert to this purpose."

Teaching and compelling us to advert to the teaching are very different things. The poet teaches and delights; delights because he does *not* compel us to advert to his purpose, but effects it while, in our delight, we are unconscious of what he is really doing.

Again Shelley says:

> "And this bold neglect of a direct moral purpose is the most decisive proof of the supremacy of Milton's genius."

On Milton's intent, I prefer the testimony of Milton himself:

> . . . "What in me is dark
> Illumine; what is low raise and support;
> That to the height of this great argument
> I may assert eternal Providence,
> And justify the ways of God to men."

If Milton and the few other great poets have not been teachers with a direct moral purpose, they have been, and still are, nothing. If Shelley meant that the poet should not use the prose teacher's method, he is right; if he meant more than this—and probably he did—he is wrong. The great poets, as we have learned from Bishop Lowth, "dissembling the intention of instruction," exhibiting "only the blandishments of pleasure," still "treat of the most important things, of all the offices of life." We know well that they do this in a very different way from that of the philosopher, but we know, if we know anything, that they do this in their own way, which way is most thorough and effective. However, Shelley's testimony, taken as a whole, is a sufficient answer to any errant portion of it.

> "But it exceeds all imagination," he observes, "to conceive what would have been the moral condition of the world if neither Dante, Petrarch, Boccaccio, Chaucer, Shakespeare, Calderon, Lord Bacon, nor Milton, had ever existed; if Raphael and Michael Angelo had never been born; if the Hebrew poetry had never been translated; if a revival of the study of Greek literature had never taken place; if no monuments of ancient sculpture had been handed down to us; and if the poetry of the religion of the ancient world had been extinguished together with its belief. . . . Poets are the unacknowledged legislators of the world."

I wonder how many readers remember these words: "I consider poetry very subordinate to moral and political science, and if I were well, certainly I would aspire to the latter." They are Shelley's, written to Peacock in 1819, two years before he wrote the "Defense," when he must have been twenty-six or twenty-

seven. This is not the notion that the great poets have of their art, whether in youth or in age. With all his brilliance, the figure of this beautiful poet stands somewhat dim and shadowy; with the light and outline of the angel, there is yet something wanting: Shelley is not quite whole, not an "unspotted soul." Read between the lines, Arnold's stern conclusion is nearer just than it strikes one at first:

"The man Shelley, in very truth, is not entirely sane, and Shelley's poetry is not entirely sane either. The Shelley of actual life is a vision of beauty and radiance, indeed, but availing nothing, effecting nothing. And in poetry, no less than in life, he is a beautiful *and ineffectual* angel, beating in the void his luminous wings in vain."

For a last word, coming down seventy years, from 1821 to 1891, it may be profitable to inquire briefly into the success of Mr. Theodore Watts' attack on the old notion of poetry as formulated by Arnold. In his article on Lowell (*The Athenæum*, August 22d, 1891) Mr. Watts says:

"It is always difficult to know when Matthew Arnold is in earnest and when he is playing with his readers; but if he was in earnest when he defined poetry to be a 'criticism of life,' he certainly achieved in one famous phrase a definition of poetry which for whimsical perversity can never be surpassed. Had he said the opposite of this—had he said that all pure literature except poetry may be a criticism of life, but that poetry must be a simple projection of life in order for it to be separated from prose—he might perhaps have got nearer to the truth."

If Mr. Watts, with all his acuteness, is not keen enough to know when Arnold is in dead earnest and when he is at play, we must not blame him for being blind to very plain things; among them the flippancy and padding, the newspaper recklessness sometimes displayed in the staid columns of *The Athenæum*. In this article we are informed at the first dash that most Americans lack "moral, high-bred courage." This may be, but some of us have enough patience and courtesy to hear a speaker through before beginning to dispute him. Arnold did not define poetry as a "criticism of life," but as a "criticism of life under the dictates of poetic beauty and poetic truth," as a "powerful *poetic* application of ideas to life." In exemplifying this poetic application, he said that it has the accent of such a line as

"Absent thee from felicity awhile,"

an injunction to which Mr. Watts seems to have yielded temporary obedience. He goes on to say:

"If there is in any literary work a true projection of life, it must sometimes be classed as poetry, even though the writer shows but an imperfect conception of poetic art. Although much of Browning's noble and brilliant writing is a 'criticism of life,' and is, therefore, as I think, not poetry, a very considerable portion of his work is poetry, because it is a true projection, and not a criticism, of life. But Lowell's verse is all 'criticism of life.' Of poetic projection there is almost nothing at all."

While Mr. Watts is right in saying that much of Browning's writing is not poetry—he goes too far in finding "almost nothing" of poetry in Lowell—how is it that, with his mind and experience, and Anglo-moral courage to top it all, he does not know that, instead of combating Arnold's idea, he is reproducing it in less happy words of his own? In saying that, because much of Browning's work is rather a criticism than a "projection" of life, it is something different from poetry, he is simply saying what Arnold says better, viz., that it is something different from poetry because it has not the "matter and the inseparable manner" of "adequate poetic criticism."

FATHER JUNIPERO SERRA.

BY FRANK J. POLLEY.

A HUNDRED years have passed since the death of Father Junipero Serra. For a man who stood first and foremost among that band of missionaries, military authorities, and civilians to whom Spain had confided her interests in colonizing Upper California, he has received but little attention proportionate to his merits from the world at large.

Prior to the researches of Bancroft and Hittell, no historian of California discussed the life and labors of this zealous, faithful, and untiring priest with the fulness that the subject would have justified. Such articles as often appeared in the general press of this State were evidently compiled from poor or insufficient translations of Father Palon's life of Junipero. Even so able and conscientious an historian as Royce, in his late history of California, cannot give room to treat in detail of Serra's work, but while passing the whole subject of the early missions over with the briefest mention, he pays him the following tribute: "About Serra's high worth as a man and as a Christian there is, indeed, no controversy among those who know his career."

Fortunately, however, such neglect is no longer to be expected, and for the last few years Father Junipero's labors have met with universal praise,

while his character as an able, constant, conscientious, pure-minded, and unselfish worker in his chosen field grows brighter as the critical attention of the public is directed to it. More than any one else of the eighteenth century, he stamped his impress upon the record of Californian history, and fully deserves an honorable place among the illustrious names of the makers of America. He was as sincere a man and as willing and able to perform the work to be done as any who have ever lived for so high and holy an object in life. He strove only for the reward that comes in the life beyond, and with that goal ever in sight labored for those on earth whom his belief taught him were in peril of not sharing in the joys of the future life. The life of St. Francis of Assisi was a stimulus to Father Junipero, and the records of the saint's work, his faith, courage, hope, and cheerfulness under difficulties were as personal calls to Junipero during the many years he was a devoted and loyal follower of the Order of Franciscans.

Born of humble parents, November 24th, 1713, at the island of Majorca, he early chose the life of the Church, and during his boyhood and youth fitted himself for the office he aspired to. Once admitted to the Church, his zeal, learning, and eloquence soon commanded attention. He formed friendships with his brother priests that were destined to be tried in after years by hardship and peril of all kinds, and yet which were broken only by death, so loyal were these men to each other and the cause they worked for.

It was on August 28th, 1749, before he was able to set foot on the shores of America, after years of hoping and patient waiting. He was then a man of years, past the inexperience of youth, yet his zeal could not allow him to wait for the regular transportation, and starting from Vera Cruz, he made the journey to Mexico on foot. He had only one companion, but the perils of the way were as nothing to the unrest in his soul at being kept from the scene of his future labors. He was at once assigned active labors in the surrounding country, and for nineteen years labored hard and earnestly; teaching the Indians, improving the missions and church property, preaching, travelling, and seeing as well to the temporal welfare of his charges as to their spiritual salvation. His abilities were pre-eminent, and when upon the dissolution of the Order of Jesuits it fell to the lot of the Franciscans to succeed to the field of labors so long and faithfully worked by those brave men, the authorities at once, and without solicitation from Father Junipero, selected him as their leader to extend the work of the Church among the Indians of Upper California.

His executive ability was of high order, and with the assistance of Jose de Galvez, the visitador-general, expeditions by sea and land were soon under way to San Diego. The start was made on January 7th, 1769, and after disheartening sorrows and suffering a reunion was effected in San Diego, and on the 16th day of July, 1769, the first mission in California was founded there. The condition of affairs was discouraging; the voyage by sea had been fateful, one vessel was lost, the scurvy had broken out, Father Junipero was very sick, provisions were low, and the overland party in but little better condition after their months of wandering in search of roads through the valleys, mountains, and desert wastes. The Indians proved thievish and treacherous; they stole from the scanty supplies of clothing and even attempted to cut the sails from the ships, so that while sick and needing rest in body and mind all were called upon for ceaseless vigilance.

An expedition had been dispatched overland to search for Monterey, but passed beyond, reached San Francisco Bay, and returned in a starving and

destitute condition to their waiting friends. A vessel had been sent to Mexico for help, and before its return the Indians made an attack upon the little settlement. Six able-bodied men were all that were left to defend the lives and property of their companions; but the Indians, unaccustomed to fire-arms, were repulsed by these few.

Relief at last came from Mexico and hope once more arose. Energetic measures were instituted and maintained by Father Junipero until an expedition was under way for Monterey. This time the bay was seen and, with a heart filled with gratitude, a landing was made and Father Junipero raised the cross and preached a sermon to the company under Viscaino's oak. The primary objects of the first expedition were accomplished. San Diego and Monterey were settled, and a messenger was dispatched with the information to Mexico, where bells were rung, proclamations printed, and the news at once sent to Spain.

No day or hour was lost to Father Junipero. He labored with the laborers, taught with the priests, advised with the military commander, organized expeditions in search of fertile valleys, and rested only to conduct the services of the Church. He was unceasing in his efforts to obtain new missionaries, and as fast as help was received missions were founded and the work of converting the Indians commenced. He made his journeys on foot in all kinds of weather and with insufficient guards. No danger could make him turn from the path of duty while a soul remained unsaved.

He was happy in his chosen work; the soul was dominant and the ills of the flesh were disregarded. In the midst of his labors came news of distress at San Diego, and hunger was even then causing much suffering at Monterey. The Indians had helped the colonists with seeds and nuts, but the supply was insufficient. Junipero was in bodily ailment at the time from an ulcerated limb, but without a murmur he made the journey overland to San Diego, explored the valleys, founding the Mission of San Luis Obispo and making friends with the Indians as he journeyed.

At San Diego the captain of the ship *San Antonio* was found with supplies, but refused to proceed to Monterey on account of the lateness of the season and the danger of the winter winds. But no difficulties were insuperable to Father Junipero, and not until he saw the vessel leave the harbor and a pack-train commence its overland journey for Monterey, did he feel that the destruction of his labors was averted and his friends and companions relieved from danger.

Hardly was one trouble settled than a more serious one presented itself in the fact of a change of administration in Mexico and the efforts of the Dominicans to be allowed to share in the territorial and spiritual conquests of the Franciscans.

To negotiate or properly represent the cause of the missions without an agent in Mexico was manifestly impossible. No one save Junipero was deemed equal to the task, and after consultation with his missionaries and a decision made, he, with his usual energy and promptness, started upon the long trip to Mexico. Only an Indian boy accompanied him on this tedious, dangerous journey, during which they were both ill of a fever and once given up for death. They met with friends, and upon arrival in the capital so well did he argue his case, and so impressed were all with his honesty, sincerity, and ability, and so able a diplomat did he prove himself that he was successful beyond his hopes. The Dominicans received as their territory that known as Lower California; San Blas was saved as a shipping port; the finances of the missions placed in better order, and expeditions planned, equipped, and started for further surveys and explorations.

The authority of the priests extended to the matter of preserving discipline and morals in the settlements, a better system of supplies arranged, disturbing elements among the military, noticeably Fedro Fages, the commandante, removed, and, most important of all, the full winning over to the cause of Bucareli, the viceroy of Mexico; and so skilfully did Junipero plan that the best human foresight with the means at hand could hardly have accomplished more. Laden with provisions, encouraged by the friendship of those in authority, at the end of two long, busy, laborious, and eventful years, he said a tearful adieu to all and bade a last final farewell to the homes of his friends, the comforts of life, and the security of civilization.

Two years had passed since his departure from San Diego, and learning of hardships and privations at the missions, he left the vessel, and with a train of pack-mules laden with supplies went to all the missions from San Diego to Monterey, a veritable good shepherd who carefully watched and tended his flock.

In the midst of his unremitting labors and journeyings came the news of an Indian outbreak at San Diego in which several of his friends were killed and wounded; also that a most unfortunate quarrel had arisen between Commandante Rivera y Moncada and the missionaries as to the punishment of some neophytes whom it was alleged had been concerned in the outbreak and jointly responsible for the murders. The missionaries were for pardoning them, but the commandante, in defiance of the priest's orders, broke open the warehouse on the beach, where the neophytes had taken refuge and claimed the privilege of the sanctuary. The quarrel assumed grave aspects, for the commandante dragged forth his prisoners and was excommunicated therefor by Father Fustu, who was an eye-witness of what was to him a scandalous and sacrilegious act. In those times and under the circumstances such an anathema was a serious matter, and Moncada in order to obtain absolution went to Junipero, then at Monterey. Not obtaining it, he appealed to the authorities in Mexico, and was soon afterward transferred to Loretto, in Lower California. Nothing could have struck deeper into Junipero's heart than to lose a mission or see the work into which he was throwing his whole soul retarded for a moment, and as soon as possible he started for San Diego. Arriving there, sailors, neophytes, soldiers, and people of all classes were soon engaged in the rebuilding of the mission.

Junipero labored with the rest, quarrying stone, making adobes, and pushing the work forward with feverish haste. A short time would have sufficed to have completed it, but again Moncada hindered him by issuing orders calling off the soldiers, pretending to believe another attack was planned by the Indians.

Father Junipero was firm, but pending the time before orders could be received from Bucareli he suffered martyrdom in spirit. When the decision was rendered that the Indians be pardoned, that twenty-five additional soldiers had been ordered, and that the building be not further delayed, Junipero's joy was so great that the bells were rung and a thanksgiving mass said. Moncada submitted, soldiers were appointed as guards for the different missions, and the building at San Diego was finished as planned.

Zealous as ever, Junipero pushed on to the site of the intended mission at San Juan Capistrano and dug up the bells that had been previously buried there when tidings of the trouble at San Diego had caused a cessation from work.

To further secure the peace and prosperity of the new missions, without intrusting the task to others, aged in years as he was and stricken with a painful disease, he undertook a

journey to San Gabriel in search of food. Though the Indians were hostile and the way laborious, yet rather than take one man from the work on the buildings, he chose as only companions one soldier and an Indian boy.

They were stopped by a band of painted Indians and would undoubtedly have been murdered had not his Indian boy cried out that a large body of soldiers were following them. The ruse was successful, and Junipero made his journey in safety, driving the cattle before him that he had obtained for the new mission. Meantime his work in the north had been neglected. Missions at San Francisco and Santa Clara had been planned before his departure, settlers were expected, explorations and surveys intended, and yet no news had reached him of any description for months. Once more the weary but unconquered man set his face toward Monterey, and reached there in January, 1777. He had blessed an expedition destined for San Francisco before called to quell the troubles at San Diego, and returned to find that the flag was flying at the Golden Gate. He had labored with all his soul since he assumed command in 1769, and for the few years yet remaining to him he found no rest. What he had accomplished, his many journeys, and his watchful care, all seemed as nothing to his ambitious mind. He was ceaseless in his efforts to obtain more missionaries, that he might realize the noble plans he had formed for further spiritual conquests. His watchful eye was ever on the alert for advantageous sites for missions, and the judgment that he and his followers exercised upon these occasions has never been questioned, and to-day still challenges the admiration of men who from long acquaintanceship with the entire country are familiar with all its favored sites for wealth and beauty.

He had met with great success in making converts. In all his plans the ultimate end sought to be attained was the conversion of the Indians, the salvation of their souls, and finally fitting them to be loyal subjects of the Spanish crown; and to accomplish this end he labored among them with an unflagging zeal and a patience truly saint-like at times. He had long mourned his inability to confirm. As a priest he had authority only to baptize; he studiously refrained from all efforts to be raised to the dignity of a bishop, which would have carried this power with it; but a bull was issued by the Pope on July 16th, 1774, which gave him authority to confirm for a period of ten years. Formalities and delays retarded its transmission, and the patent founded on this bull and under which Junipero acted did not reach him in California until June, 1778.

In 1779 he received news of a great political change. The territory of California, among others, had been ordered withdrawn from the viceroyalty and erected into a separate jurisdiction under the government of a comandante-general. It gave him serious alarm. He had become an old man by this time, was nearly seventy years of age, and still much afflicted in body from the severe hardships and perils he had undergone. His friend Bucareli no longer in charge, the impossibility of another journey to Mexico was manifest, and he had a new government to deal with, which might at any moment give the death-blow to his life-work. Upon receiving permission to confirm, he had undertaken without delay the arduous task of administering the rite of confirmation to all in the State, and had commenced at San Carlos. After finishing there he proceeded to San Diego, and went northward from mission to mission until he reached Monterey, worn and exhausted by the journey and the spiritual excitement under which he labored while administering the rites.

His recent efforts, and again the

old trouble from the ulcerated limb had rendered him very feeble, but in a short time he was on his way to San Francisco. At Santa Clara he was met by the officers of the government exploring expedition and found barely able to stand. With unflagging enthusiasm he pursued his work even here, and from thence to San Francisco, remaining there three weeks at labor; then hastened back to San Carlos, arriving November 9th, 1779. He had confirmed all those ready to receive the ceremony, and the consciousness of having performed his whole duty gave him strength to meet the troubles now fast approaching.

Upon Bucareli's death he had charged the new governor, Felipe De Neve, to cherish the missions, but De Neve's first act, almost, was to question Junipero's power to confirm on account of the change of governors. The question raised was largely technical and was referred to the college at San Fernando. Decision was given in Junipero's favor, with orders that he was not to be interfered with, and when going from mission to mission an escort of soldiers should be furnished him. In 1781 he was able to renew his duties, and at once made another journey to the northern missions, administering the rites as before.

A new source of trouble soon arose in the shape of a conflict with the Colorado Indians. Under the new *régime* a mission had been founded upon a new principle; *i.e.*, the missionaries were now simply religious teachers; no government was placed over the Indians; no food distributed to them brought in that close relationship with the Church that Junipero had so striven for, believing that the temporal and spiritual go well together, and both to be important factors for each other.

Provisions ran short, the supplies obtained were inadequate, the settlers encroached upon the good lands of the Indians; a train of soldiers with their animals in an exhausted condition arrived; the stock injured the Indians' fields and a massacre took place; the buildings were burned and the settlers, priests, and soldiers killed after a brave resistance.

De Neve was called south to assist in the pursuit and punishment of the Indians, but was far from successful. This unfortunate trouble retarded further progress of the proposed three new missions on the Santa Barbara Channel. It was necessary to have a colony near San Gabriel in case of further trouble in the south, and Governor De Neve, taking recruits that had been sent from Lower California for that express purpose, founded the city of Los Angeles. He wrote Junipero, as soon as the danger at San Gabriel from the Colorado Indians had passed, to come with missionaries, and the long-delayed settlements on the Santa Barbara Channel could then be made. Junipero arrived in San Gabriel in March, 1782. Not being able to supply the needed missionaries, Junipero felt called upon to serve as one himself, rather than lose a moment, and so a mission at San Buenaventura was founded. Later, on April 12th, 1782, Junipero had the joy of blessing an altar and performing the usual ceremonies of consecration at Santa Barbara; but notwithstanding all his efforts and urgent appeals, Junipero could not procure the six new missionaries for these two new missions and a third one he had also projected. The governor refused to proceed without them, and Junipero, almost in despair, hurried on to Monterey in search of help and of his expected supply-ship. A courier met him on the road with dispatches that proved to be a death-blow to Junipero. The ship had arrived, but no missionaries. Affairs were badly mixed in Mexico. The government refused to grant any of the usual governmental supplies for the missions, as the new viceroy said the governor of California had informed him they were unnecessary.

The college at San Fernando, therefore, refused to send the missionaries, and wrote Junipero to suspend the foundation of new missions until the government took a more liberal view and allowed them their supplies, as in the former times, until they could be made self-sustaining. Had his worst enemy planned the blow, it could not have afflicted Junipero more. However, he retained the mission at San Buenaventura, though being short of missionaries, and two being necessary to each mission, he was obliged to devote his time and energies to his church at San Carlos, and forego his essential visitations to the other missions.

The good fight was almost ended. While able to proceed with his work, no floods or storms of nature nor bodily ills of the flesh were ever able to check his career or his usefulness. That his life had been prolonged to his present age was a wonder to all. His limb was ulcerated and his chest much weakened, and caused him great suffering, for in his later years, as he saw the end approaching, so intensely did he feel the need of improving the hour and so enthusiastic was he that when preaching of purgatory he would tear aside his gown and hold a lighted four-wicked taper to his breast until the sight was almost sickening. He would lift a huge stone and strike himself so hard when excited by his over-fervid oratory that his friends often looked for his death. He wore the coarsest clothing and scourged himself with an iron chain. Few people were so dull as not to understand these tortures, and Junipero would endure anything to save the soul of the lowest Indian in his congregation.

Such things could not always be. The shattering of his hopes and bodily ills brought on a serious sickness. He rallied from this, and two new missionaries having arrived, he felt he could now leave San Carlos for a final visitation to his loved missions. He was seventy-one years old. Yet he proceeded at once to San Diego, and though he expected every moment to sink by the way, he went from mission to mission, carefully examining into its administration and confirming all those ready for the ceremony.

At San Gabriel he nearly died, but recovered when he heard of the good progress made at San Buenaventura. In five months he travelled, thus constantly employed, over a hundred and seventy leagues, still very weak, and safely reached his home at San Carlos. His power to confirm would expire in a short time, and without delay, as soon as the winter streams were fordable, he proceeded to San Francisco. No rest for him here. His old friend, Father Murguia, had died; so as soon as he could finish his labors at the Mission Dolores he at once proceeded to Santa Clara, and in the dead priest's church said a mass for his soul, then preached most eloquently, and afterward confirmed his people. This loss was a cruel blow to the now suffering priest, and before parting from San Carlos he made final arrangements for his own death and then bravely resumed his travels and his works.

On July 16th, 1784, the day his power to confirm expired, he had confirmed five thousand three hundred and seven persons. He honestly believed that each soul had been saved from a burning hell, and, so far as he knew, he had not been unfaithful to his trust by omitting a single soul in all the vast territory he ruled over as President of the California Missions.

The same day a ship arrived and he learned that the missions on the Santa Barbara Channel must be abandoned. It was his last hope, and with a broken heart he dispatched couriers to his friends to visit him and say the eternal farewells. Father Palon alone reached him as he lay weak and suffering in a narrow cell. A surgeon newly arrived from a vessel suggested the application of the

cautery and Junipero submitted to the excruciating torment without a murmur. He passed a bad night, prayed during the day, and upon another day he was assisted to the church, where he knelt at the altar during the ceremony, while sobs resounded through the edifice from the mourners who had already assembled to say farewell. He could not sleep that night from pain, so he spent it in the arms of his neophytes. In the morning he received the captain of a vessel then in port. He made it as the request of a dying man that in death he be laid by his old friend and co-worker, Father Crispi. He asked to be allowed to rest, and when Father Palon returned after a short absence he found him exactly as he had left him; the body was motionless, but the suffering was over, and Father Junipero Serra, the greatest of them all, was gone.

He was seventy-one years of age at his death, and for nineteen years in Mexico and thirteen long, weary years in California he had labored as no man before him or since has labored in the line of his work. The funeral was solemn and imposing. He left absolutely no earthly possessions; his robe and sandals were divided among the sorrowing survivors. The tapers were lighted round the simple coffin; Indians adorned the bier with flowers, and long processions of Spaniards and natives reverently passed beside the wasted form, touching it with rosaries and medals, that they might be blessed by mere contact with one now regarded as a saint. At the burial the soldiers, sailors, and civilians united in the solemn ceremonies, and as the dead man was laid to rest beside his friend, the tolling bells were answered by the cannon from the ships.

Such, in brief, is a bare outline sketch of this Franciscan priest. The amount of work performed and the results accomplished still challenge the admiration of the world, though its tangible part, owing to the rapacity of the Mexican and Spanish officials and the spoliations of the American settlers, aided by vexatious lawsuits, have reduced the once powerful and flourishing missions to the condition of ruin in which the tourist now sees them. During Junipero's life he held the missions together with great executive ability, and so wise were his acts and so far-seeing his plans that it excited the avarice and cupidity of the government officials. As soon as the wise care and reverent feelings toward the priests and the missions vanished and greed took its place, their doom was sealed. If Junipero did wrong, it was in planning so well that he placed his missions upon the high road to prosperity and so invited the world to a rich treasure-house where there was no power to repel the invader.

Junipero was loved by his subordinates and obeyed generally with that disinterested devotion to the great cause that so marked the early missionaries in those new fields of work, though the same zeal that made his friends love him often sorely tried the patience of the military authorities when a question of priority of authority arose between them. He was a formidable adversary when the rights of the Church were intrusted to him, absolutely fearless so far as physical danger was concerned, and unflinching and untiring in his efforts when moral suasion was necessary.

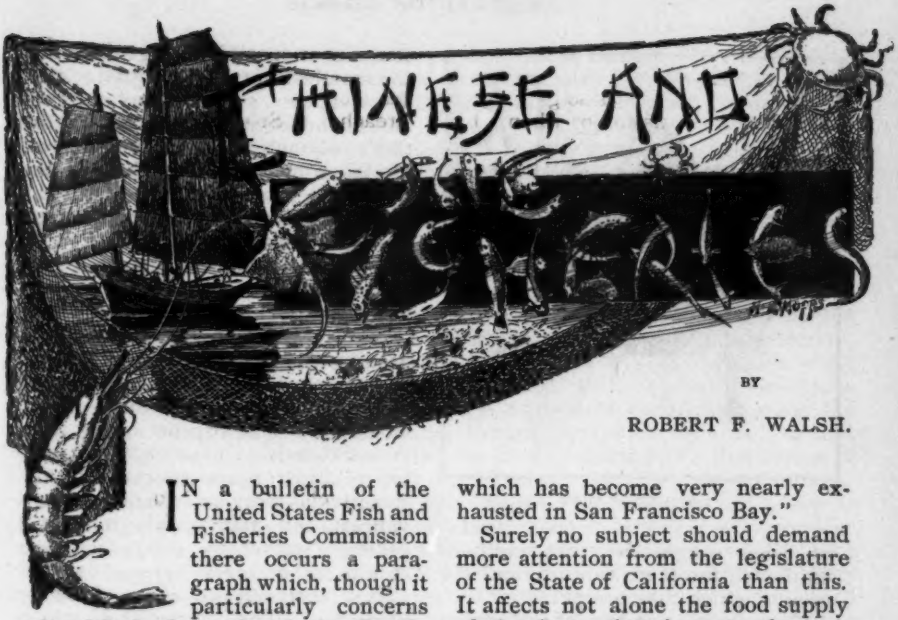
His character was a strange compound of courage, enthusiasm, patience, zeal, love, and superstition. He was thoroughly educated in the doctrines of the Church and the rules of his order. His zeal allowed him no rest in his journeys, and his diplomacy in Mexico and in dealing with the military and sailors, when he chose to exercise it, was far superior to the best among them. No man could induce a refractory captain to put to sea in winter weather or a sulking soldier to labor as he could. All love and gentleness with his

friends, he could rule with a rod of iron when necessary.

His enthusiasm was so great at the founding of a mission or when laboring for converts that, hanging his bells on the boughs, he would ring them until exhausted, hoping that the sounds might penetrate the whole land and call all to the service of God. His courage was beyond question; he, a non-combatant, had braved death at all times and in every form —hunger and thirst, the scurvy of the ship, the wildness of unknown mountains and the attacks of Indians were all known to him, and one night when huddled in a hut expecting every moment an attack and massacre he spent the long hours until morning in recounting to his friends the greater dangers he had passed through in safety. It seemed at times as if he courted martyrdom by journeyings with only one companion among hostile Indians, or through unknown regions when sick unto death and too weak to walk and almost to ride. He was simple in his tastes, dressed in the coarsest gowns, and was abstemious in his living. A man of reason also, for when on the voyage from Spain all were suffering from thirst and loudly complaining he alone was silent, and in reply he said substantially: "I do not suffer from thirst so much because I have learned to eat little and speak less and thereby save my saliva." Though president of the missions, he asked no man to do what he would not do himself, and by his constant daily labor in working the soil, making bricks, and participating in the details of building he stirred all men to emulation.

He never sought for temporal power; the presidency was conferred upon him because of his merits and without solicitation, and while he could have probably been raised to a bishopric he made no effort toward the same.

A salary was originally allowed the priests from a fund known as the Holy Fund, but he gave his to the cause he worked for and died without worldly wealth. His power as a preacher in Spain and then in Mexico gave him great fame. His earnestness is shown in the lacerations of the flesh before alluded to as a means of more deeply impressing his auditors. His life was a constant struggle for existence against the painful ulcer upon his limb, contracted from a wound received while journeying to Mexico. That he was filled with enthusiasm and fully believed that the Lord was directly assisting him to do his work cannot be denied. Often, especially in his younger days, he saw a miraculous intervention in happenings where, had he chosen to look deeper, a simpler explanation might have been found: for instance, when a man appeared and rescued him from a flood and then disappeared, he thought an angel had been sent; when, the commander being about to desert the port of San Diego, he asked him for an extension of time to a certain day, and on that day the supply-ship was seen, then disappeared and then three days later came into port. The vessel was passing on her way to Monterey, but meeting with an accident in the Santa Barbara Channel put back to San Diego for repairs, and so almost by a miracle saved the starving colony which had been unable to reach Monterey. That in all things he may not have acted as calmly and soberly when harassed and thwarted by unsympathetic military commanders in defiance of what he honestly and sincerely believed to be their orders and their duty, may be true; but that human foresight could do more than he did under the conditions in which he found himself placed, or that one could be more faithful to his trust, more sincere in his beliefs, and fight the good fight better than this old unconquered priest is much to be doubted and has never been proved.



BY

ROBERT F. WALSH.

IN a bulletin of the United States Fish and Fisheries Commission there occurs a paragraph which, though it particularly concerns the fish food supply of the Pacific coast, is of national importance. This paragraph refers to the methods of fishing employed by the Chinese in Californian waters. It appears that these Mongolians are peculiarly fond of shrimps and young fish—much too young and small to be considered available as a food product by Americans or Europeans—and for the capture of such immature fishes, shrimps, and prawns they use fyke and bag nets, the meshes of which are so small that "prodigious quantities of small crustacea and other small fry such as large fish of commercial importance subsist upon" are daily taken from the waters around the Californian coast.

Commenting upon this condition of affairs, Mr. Richard Rathbun, in the paragraph to which I have referred, says that the fishing methods of the Chinese "for shrimp and small fish" should be restricted "not only because of their great value as articles of food and profit to mankind directly, but also for the reason that they form a very important part of the food of fishes—the supply of which has become very nearly exhausted in San Francisco Bay."

Surely no subject should demand more attention from the legislature of the State of California than this. It affects not alone the food supply of the State, but importantly concerns the prosperity of one of California's greatest export industries. State legislation, stringently enforced, can alone put a stop to this wholesale capture of immature fishes and fish food; and in order that the seriousness of the position may be better understood, I shall briefly explain the extent of the Chinese fisheries on the Pacific coast, the kinds

ONE OF THEM—A TYPE.

ANOTHER OF THEM.

of fishes sought for, the methods employed for their capture, and the uses to which they are put.

The entire number of fishermen employed in the fishing industry of San Francisco and the adjacent regions embraced in this section is 2,512, of which 807 are Chinese. Only 620 are American-born, and the remainder is comprised of natives of British Provinces, Portugal, Sweden, Norway, Italy, and of almost every nation of Europe. It will, therefore, be seen that the Chinese fishermen form nearly one-third of the entire number engaged in the fisheries, and as we proceed it will be evident to the most obtuse reader that the energies of this one-third are chiefly directed toward capturing those small fishes which in time supply the waters with fishes of commercial importance, and which form the chief part in the food supply of these fishes. In this connection Captain J. W. Collins says: "It is generally agreed that the Chinese fishermen have little regard for the law (if they can evade it) and absolutely no consideration for the preservation of young fish from destruction. 'All is fish that comes to their net,' in the strictest sense of the term, and the apparatus they use is specially designed to take the smallest forms of aquatic life." They capture a good many sturgeon and flounders, in fact all kinds of fish that frequent the Californian coast are taken by them; but their principal catch consists of shrimp, small fishes, and prawns—without respect to season, size, or quality.

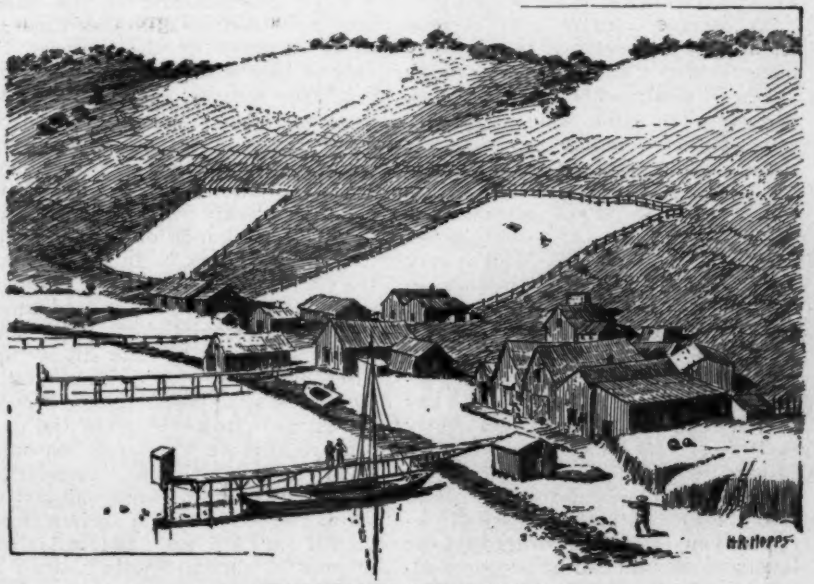
Describing their apparatus, the report of the United States Commissioner of Fish and Fisheries says that "it varies in character, is exceedingly destructive of minute forms of marine life, particularly young fish, and is generally distinctively Oriental." The bag-net is the form most extensively used; but they also use fykes, sturgeon trawls (most destructive as well as inhuman contrivances), and many other modes of fishing, "either to obtain the best results *or to secure secresy, since the Chinese commonly use illegal forms of apparatus.*" The bag-net itself, which is allowed by the existing laws, is a most formidable as well as destructive fishing appliance. This net is usually about forty-two feet long and is formed like a great cone-shaped

STAMPING SHRIMPS.

sack or bag. It is twenty-four feet wide at the mouth and tapers toward the end or apex, where it is from three to four feet wide. The end is open when not in use, and is tied up with a "puckering string" when set. Half of the net, next the mouth, has a two-inch mesh; the middle section (about twelve feet) has a one-inch mesh, and the remainder, forming the lower end, has a mesh measuring only one-fourth to one-half inch. "Considering the contraction caused by tying up the smaller end of the bag, it will readily be seen that scarcely any marine life is minute enough to pass through the meshes."

The Chinese do not affiliate with the other fishermen, but form colonies of their own race close to the fishing-grounds. These settlements are called "camps;" they are devoid of all suggestion of comfort or cleanliness and afford the most meagre shelter for the Mongolian fishermen, who, as a rule, remain but a few seasons, and then return to China with the proceeds of their illegal and destructive fishing. Mr. W. A. Wilcox estimates that the number of bag-nets in use averages "five or six to a man;" so that there are employed in the fishing industry of San Francisco and the adjacent regions at least four thousand of these most destructive fishing appliances. The favorite method of setting these nets is to set them in rows, the mouth of each fastened between two poles driven into the bottom. By this means the mouth of the net is fully distended, while the body of it swings away with the tide. In some localities these bag-nets completely cover the bottom "across a wide area," so that no kind of marine life that comes in or goes out with the tide can escape.

When the Chinese use gill-nets their mode of fishing is very peculiar and amusing. Having set the nets they remain close by in their boats to watch the approaching schools of fish; if they see the fish close to the net but not disposed to enter, they set up a terrific babel of shouting, pounding the sides of the boat with



FISHING VILLAGE, POINT SAN PEDRO.

clubs and splashing oars in the water "to frighten the fish, so that they will, in their wild rush to escape, plunge into the meshes of the nets." This custom is decidedly Oriental; for in a report of the Inspector-General of Maritime Customs of China I find mention made of many devices used for this purpose in China—notably trained otters, who drive the fish into the nets with the same skill and patience that a collie dog drives sheep into a fold.

Having briefly explained the numbers and conditions of the Chinese fishermen, the kinds of fishes they capture, and the methods they employ, I shall now describe their peculiar and interesting method of curing their captures for export to China. And I shall explain, as well as I have been able to estimate it—from an examination of the reports of the San Francisco customs and of the Inspector-General of Maritime Customs of Shanghai, China—the extent of the exports of shrimp and small fish by Chinamen from San Francisco to the Flowery Kingdom.

As shrimp is their chief capture and forms the bulk of their export business with China, and other fishes are cured and dried by them in almost precisely the same way, a description of their method of preparing shrimp for export will here suffice. Mr. Alexander says, however, that the curing of the immense quantities of small fish from one to two inches in length "is performed in a very discreet manner, especially when an unusual amount of illicit fishing has been going on."

The shrimp are first placed in a vat of boiling water, where they remain for about ten minutes. They are then spread "to dry, upon gently declining or level stretches of hard ground which has been previously stripped of grass and rendered quite smooth." For this purpose a hoe-like broom is used in order that the layers of shrimp can be properly adjusted without bruising or mutilation. When they have been exposed to the sun for four or five days they are considered to be sufficiently dried, and they are then crushed under large wooden pestles or trod upon by the Chinese, who wear wooden shoes specially made for the purpose. This crushing process is for the purpose of loosening the meat from the outer chitinous covering. The shrimp are then taken up and placed in baskets which are violently shaken until the shells are removed from the meats; but the most approved method is to remove the shells by placing the dried shrimp in a winnowing machine. Mr. Rathbun says that "this fanning mill, which is a rather crude affair, is constructed of wood by the Chinese on precisely the same principle as the one used for winnowing grain." The meats and shells are then packed for exportation, reserving a small quantity for sale among the Chinese of San Francisco. The shrimp shells are utilized in China as a fertilizer for the tea plant, rice, etc.

The determination of the exact amount of shrimp and other kinds of fishes captured by the Chinese can only be approximated, for they never give true returns, not even of their exports to the customs authorities. They know that they have fished illegally, and are consequently "disinclined to discuss what they have done," evidently "dreading ill-treatment at the hands of the legal authorities or others." In this respect the Chinese fishermen of California seem to rival "Ah Sin" of card fame; they are accomplished liars, and seem to be able to hide illicit captures and nets with quite as much ease as he is supposed to have hidden the cards. However, from the customs returns we can safely estimate upon Captain Collins' calculation that in 1888 there were shipped to China 769,660 pounds of shrimp meat, valued at $76,966, and 3,842,200 pounds of shrimp shells, valued at $38,422. Besides this there were used

BEATING SHRIMPS.

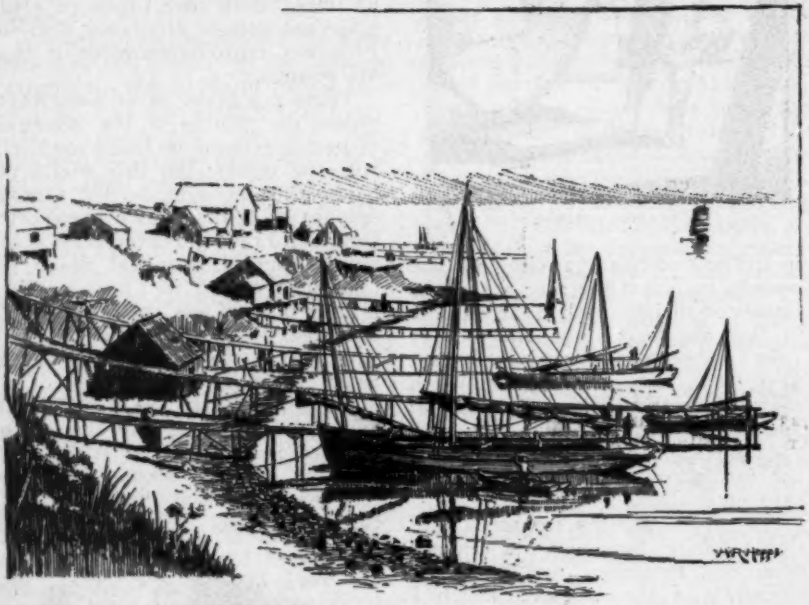
in and around San Francisco 290,000 pounds, valued at $23,200; so that the estimated shrimp catch of the Chinese in that one year amounted to over 1,000,000 pounds of shrimps, worth $138,588. The quantity of small fish captured by them is unascertainable; and I am forced to believe that even the figures given by Captain Collins are far behind the true quantities shipped to China.

All of the shrimp imported into China "from foreign ports" comes from San Francisco, and here is a summary of the amounts which I have culled from the voluminous reports of the Inspector-General of Imperial Maritime Customs at Shanghai. I was forced to select the reports for the first two quarters of 1892, as no details of individual imports were previously given; but from my examination of those of 1885, '86, '87, and '88, I feel convinced that these figures will very nearly average the imports of 1888. The returns include reports from the twenty treaty ports and ports of entry; but only eight of these seem to have received shrimps, viz., Ichang, Kinkiang, Ningpo, Foochow, Tamsui, Tainan, Swatow, and Chunking. For the six months ending June 30th, 1892, there were received into these eight ports, from San Francisco, 9,974 *piculs* of dried shrimp and prawns, or about 1,239,864 pounds; and estimating that the imports for the other half of the year would be twenty-five per cent less (although in the third quarter the imports of Tamsui and Foochow were more than double the previous two), we have an importation into China of about 2,000,000 pounds as against the San Francisco customs estimate of 769,660 pounds.

There is a grave error somewhere unless the returns of the Shanghai inspector-general included the shells with the meats; but this would not balance the account, for the average amount of shells annually exported from San Francisco exceeds 2,000,000 pounds, and this would make the quantity received in China nearly a million pounds less than the amount exported from California. But it would be impossible to discover the exact amount of either shrimp or any other fish captured by the Chinese, and we may safely lay our forced ignorance of the matter at the doors of those cunning Mongolian fishermen who "for ways that are dark" certainly excel their compatriot,

SHRIMP MILL.

"Ah Sin." In 1891 there were 284,676 *piculs* and 35 *catties* of "fish and fishery products" imported into China from "foreign countries," or in other words 12,316,007 pounds, valued at 2,640,444 *haikwan taels*, or $3,168,520. This did not include *bêche de mer*, isinglass, or seaweed, which come chiefly from Japan; and I think it can be safely assumed that many thousands of pounds of immature Californian fish were included in that immense importation of fish and fishery products.



SHRIMP-CATCHERS' VILLAGE, SAN FRANCISCO BAY.

There is still another fishing industry of the Pacific coast which is almost wholly confined to the Chinese, and in this they pursue the same ruthless capture that I have shown marks their bag-net fisheries. This is the collection of *haliotis*, or abalone shells. These shells are not found on the Atlantic coast nor anywhere in South America, but they are very abundant on the Pacific from Cape Saint Lucas to Kamtchatka. The Chinese dry and salt the meats and send them to China, where they are much prized; but the chief value of this fishery lies in the shells, which are used for ornaments and even jewelry—a fine, well-polished *haliotis* shell being worth anywhere from $1 to $25. In 1888 there were 2,600,000 pounds of shells and meats, valued at $55,000, collected on the Californian coast, nearly all of which went to China—only selected shells being purchased by dealers in San Francisco. This shell is the mother-of-pearl or "Norman shell" of old English writers, and is found in abundance in the Channel islands. The Indians of the Pacific coast use *haliotis* shells as ornaments, and they were formerly used by some of the tribes, cut into different sizes, as coins. The present market value is $90 per ton for the shells and $40 per ton for the meats. But, as with all fisheries on our coast which are controlled by

the Chinese, the *haliotis* or abalone fishery is so depleted by their indefatigable exertions that "fears are felt for its future, and these mollusks are being rapidly exterminated along the whole coast."

The question, therefore, arises: What could or should be done to preserve the Pacific fisheries from the ravages of the Chinese? But before suggesting a remedy, I shall recapitulate what I have written and add new evidence of the enormous damage done to the prosperity of the Californian fisheries by the unrestricted extermination of food-fish and fishes' food in these waters.

The total value of the fisheries of San Francisco in 1888 was $4,463,369, of which $2,490,373 was for whalebone, whale oil, and furs; leaving $1,972,996 as the value of the Californian coast fisheries. Of this $509,175 was for oysters and $372,423 for crustaceans and mollusks—chiefly shrimp, prawn, *haliotis*, and clams; so that there remains $1,091,398 worth of fishes of different kinds—salmon, shad, etc., etc. It is this last class that forms the chief fish food supply of the Western States; the quantities obtainable were far greater ten years ago than they are to-day, and one and all of the representatives of the United States Fish and Fisheries Commission lay this depletion and deterioration of the fisheries at the door of the destructive and illegal fishing of the Chinese. As Mr. Rathbun says, "The supply [of food-fishes] has become very nearly exhausted in San Francisco Bay," and he adds that this is caused by the Chinese methods of fishing—capturing, as they do, not alone edible shrimp and other fishes, irrespective of their condition and size, but also all minute marine life which forms the most important and practically the sole food of salmon, shad, and other commercially valuable fishes.

Commenting upon the growing scarcity of fish in Californian waters, a writer in the San Francisco *Bulletin* says: "Another explanation which is now given is the ravages which the Chinese are making upon the young fish. Hundreds . . . are employed constantly in catching the young fish, including every species in the bay, just developed from the ova, in which work they employ fine nets, scoops, and other effective methods. This material is esteemed a prime delicacy among the heathen, large quantities being consumed in the city, and the business of preserving the young fish and shipping them to China has become an important industry. Thousands of young salmon, from two to four inches in length, may be found among the large supplies brought

ALTAR IN A FISHING VILLAGE.

in daily to the fish shops in the Chinese quarters, and this is undoubtedly the true explanation of the alarming decline in the quantities of the best fish. The process continued for a few years will render salmon and other favorite species a rarity in these waters." Mr. Alexander says that the Chinese "seem to take pride in transgressing all laws established by the State." The question naturally arises: Why are these laws not strictly enforced? Or, if they are inadequate to cope with the "scourge," why does not the California State Legislature enact some measure to afford the food-fishes protection from those Chinese depredators?

It has been estimated that if the fisheries of California were properly conserved by judicious State legislation (*which should be strictly enforced*), the quantity of salmon, shad, etc., obtainable in these waters could be more than trebled in a few years. I believe that there cannot be a doubt about this, *i.e.*, if the Chinese are prevented from using such fine-meshed nets and the indiscriminate capture of immature fish and fish-eggs and fry is made punishable by severe fines and imprisonment. It seems to me to be the duty of the State to insist upon the passage of some such law. This fishery affects the people of a very large territory outside California; but it chiefly concerns the people of this State, and I cannot see why the legislature of California does not take prompt and energetic steps to protect an industry which would yield to its citizens an increased fish production of from two to three million dollars annually.

TO THE QUEEN OF NIGHT.

BY F. V. McDONALD.

Thou silent watcher o'er a sleep-bound world,
Thou fount of mystic faith and hope and fear!
Beneath thy silvery mellowing rays unfurled,
Life's rugged outlines molded soft appear.
I love to watch thy restful, changeless way
Across the ever-changing, restless sky,
And after each uncertain, troublous day,
To feel thy love beam softly from on high.
While God, in his all-wondrous majesty,
His symbol in the Orb of Day doth place,
The tender love that lights his heart and face
He leaves for gentle Night to show in thee,
As on thou sailest in thy starlit grace,
Thou radiant Queen of Night and Destiny.

IRRIGATION IN CALIFORNIA.

BY WILLIAM A. LAWSON.

IRRIGATION has become one of the chief factors in the development of California. Much has already been accomplished through this agency, but the improvement through irrigation is small compared with what will be accomplished by the same agency during the coming century. So far the employment of irrigation in this State has been rather local than general. Its use has been confined chiefly to districts in which the rainfall is too scanty or uncertain for safe and profitable farming or fruit-growing. But gradually knowledge of the benefits of irrigation is extending, and the use of water for increasing the productiveness of the soil is spreading to districts in which irrigation is regarded as not necessary to successful agriculture. It is perceived that irrigation may be a valuable aid, even where the natural precipitation suffices for the production of good crops of the cereals. Such use of water enables the farmer or the fruit-grower to diversify his crops, or to successfully till lands that in their natural condition are inferior or even worthless for agricultural purposes.

While the climate of California varies greatly with latitude, altitude, and distance from the sea, it has certain characteristics common to all parts of the State. Everywhere the summer is dry and warm. With but slight exception, the summer months are rainless. For this reason irrigation may be practised with benefit in all counties of the State, on all upland soils receiving no moisture by infiltration from rivers, lakes, or other bodies of water. Striking examples of the value of irrigation may be seen in the counties of Shasta and Siskiyou, where the annual rainfall exceeds thirty or forty inches, as well as in portions of San Diego and San Bernardino, at the opposite end of the State, in which localities the rainfall may be in some years as slight as five or ten inches.

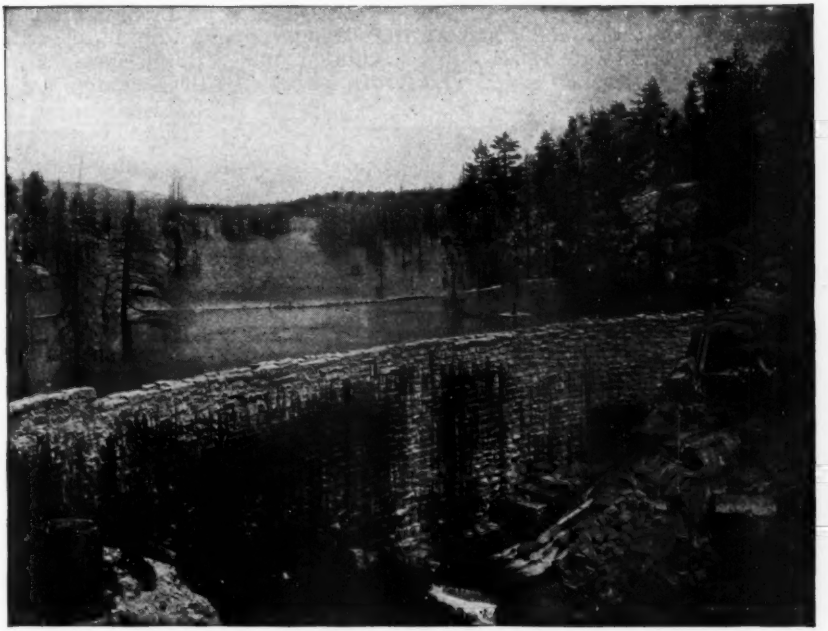
The question as to the value of irrigation in any region is not to be determined by the amount of its annual rainfall. It is the seasonal distribution as much as the quantity of rain that makes agriculture secure and enables the cultivator to dispense with irrigation. In many localities in California the idea has prevailed that because crops of winter wheat and barley can be grown successfully without irrigation, such use of water is not desirable for general rural development. But it is to be noted that in those districts of the State in which no irrigation is practised, and where the lands are devoted to wheat and barley almost exclusively, little or no progress has been made in the past ten or twelve years. Dry farming has tended to decrease the number of farmers and to enlarge the area of farms through the absorption of small farms by the larger ones. The substitution of machinery for hand labor has helped to bring about this unfortunate condition of things. Small farming for wheat has become unprofitable, and the tendency of wheat-growing is still to enlarge rather than to decrease the area of ranch properties. On the other hand, where irrigation has been introduced upon plains formerly devoted exclusively to the production of grain, a remarkable improvement has been brought about, as in the southern part of the San Joaquin

Valley. There the construction of irrigation canals and the boring of artesian wells has made wonderful changes for the better in population and wealth. The irrigated districts are peopled by small farmers and fruit-growers, whose prosperity has built up large towns and given vastly increased traffic to railroads. Southern California, likewise, presents marvellous proofs of the great advantages of irrigation over dependence upon rainfall. Similar examples of prosperity and progress through irrigation are to be found in scattered localities of Northern California, as at Florin, Brighton, Woodland, Vina, Oroville, Newcastle, the Santa Clara Valley, and numerous other localities, particularly in the foot-hills on the eastern border of the Sacramento Valley.

In the course of time irrigation will accomplish as much for the Sacramento Valley as it has for the plains of Lombardy, whose far-famed fertility and productiveness are chiefly due to the intelligent use of water for irrigation purposes. The natural conditions in this noted Italian region make irrigation less necessary than in the valley of the Sacramento. On the Lombardy plains the temperature rarely rises as high as ninety degrees (Fahr.), and the average annual rainfall is greater than at Sacramento. Yet half the flow of the rivers of Lombardy is used for irrigation, being distributed, through more than 4,500 miles of canals, over 1,400,000 acres. The canals of Lombardy represent an investment of $30,000,000, and have increased the annual rental value of the lands watered by $4,500,000. Irrigation has added enormously to the productiveness of the country and made a varied agriculture practicable, such as promotes the multiplication of rural homes and gives large employment to labor. The great dairy interests of Lombardy are supported mainly through irrigation. In further illustration of the fact that the amount of the annual rainfall does not determine the question as to the utility of irrigation, it may be remarked that in Madras, India, where upward of 5,000,000 acres of land are under irrigation, the average annual rainfall is about thirty-five inches, or about twice that of the Sacramento Valley.

It is not, however, necessary to look abroad to find ample evidences of the immense value of irrigation in promoting subdivision of lands and giving rise to varied agricultural industries, such as support a large population on a relatively small area. In the irrigated colony tracts of the upper San Joaquin Valley and of Southern California are hundreds of twenty and forty acre farms, each giving a better support to a family than it is commonly practicable to obtain anywhere from one hundred and sixty acres of ordinary farming land not irrigated. The use of water permits of a succession of crops throughout the year, while under the system of summer fallowing generally practised in this State for wheat-growing, the land produces but one crop in two years. By the aid of irrigation, alfalfa, that most valuable of hay or forage crops, may be successfully grown on almost any soil, and particularly on rich sandy soils that in a state of nature lack the moisture necessary to the plant. In Kern and other counties of the San Joaquin region lands once little better than desert are now, through irrigation, producing from eight to ten tons of alfalfa to the acre each year, obtained in four or five cuttings, sometimes also affording pasturage for stock for a month or two.

The present murderous system of wheat-farming in California is gradually exhausting fertility and will ultimately compel a general resort to irrigation. Wheat is grown without any sort of fertilizing to restore to the soil the elements taken away with each successive crop, and there is followed no system of rota-



THE BEAR VALLEY DAM.

tion to lessen the steady drain upon fertility. The expedient of allowing ploughed land to lie idle each alternate year, called summer fallowing, in reality restores no fertility to the soil, merely rendering more available for the needs of plants a portion of its native store of the mineral elements necessary to production. If the farmers were obliged to replace, in the form of commercial or other fertilizers, the potash, phosphoric acid, and nitrogen shipped away with each crop of wheat, the present margin of profit in wheat-farming would be completely wiped out or converted into a net cash loss. And these elements must ultimately be restored, or the land will become barren. Already some of the poorer valley lands are practically exhausted for wheat-growing.

Fortunately in irrigation there is a ready means of averting exhaustion of the soil. By the use of water on the lands now exclusively devoted to wheat it will be practicable to grow alfalfa, root, and other crops, so as to provide rotation. With the use of water, the wasteful and antiquated practice of summer fallowing will no longer seem necessary, and the farmers will be enabled to gather two or more crops in one year where they are now obtaining but one crop of wheat in two years. Alfalfa may be used to restore fertility, for, in common with red clover, the plant possesses this property. Its roots penetrate to great depths, bringing up stores of plant food, while its leaves absorb nitrogen from the air. By ploughing under a growth of alfalfa, a "green manuring" is obtained which quickly restores productiveness to soils worn out by incessant cropping with wheat. This art of fertilizing, as yet almost unknown in California, has been practised in the Atlantic States and in Europe for centuries, and with marked success.

Were the greater portion of the wheat area of the State converted through irrigation into small farms producing a variety of crops, vast benefits would result. Irrigation would enable the production of grass crops to be indefinitely expanded along with their attendant industries. It may not be generally known that the grass crops of the United States, with their products such as butter, cheese, and live-stock, equal the combined value of all other crops in the country; yet such is the fact. The establishment of a large meat-packing house in Los Angeles has enabled the farmers of Southern California to learn that there is far more profit in raising hogs and cattle on irrigated lands or lands naturally moist than in growing grain even under the most favorable conditions and in the best seasons. In the production of sugar-beets, likewise, through the aid of irrigation, another most important source of agricultural prosperity is unfolded to California farmers.

In all parts of the State, on plains or hills, irrigation makes practicable the production of fruit from soils naturally too dry for the successful establishment of orchards or vineyards. While thousands of carloads of choice deciduous fruits are grown on unwatered lands, yet but a small percentage of the tillable area of the State is suitable for fruit-growing without irrigation. The notion once prevailed that fruits from watered orchards or vineyards must be inferior in quality, but the testimony of the most expert horticulturists, shippers, and packers is positively to the contrary. There are no finer deciduous fruits than those shipped from the irrigated foot-hill orchards of Placer County; no better grapes than those grown in the irrigated

A BIG WATER-PIPE.

vineyards of Sacramento or Fresno. The production of some 2,000 carloads of superior raisins in the Fresno district in a year, all as the result of irrigation, is unanswerable evidence that the judicious use of water involves no impairment of the quality of fruit. As to the 6,000 carloads of oranges produced in Southern California in the season of 1892–93, it is scarcely necessary to say that all were from irrigated orchards. Without irrigation the immensely valuable citrus industry of this section of the State would have no existence. Through this one channel millions of dollars flow into Southern California from the East, as the result of the intelligent application of water to lands once regarded as worthless for agricultural or horticultural purposes. The very finest of this fruit is grown on high and dry soils that were in connection with the missions about 700 miles of canals or ditches for purposes of irrigation or general water-supply. Most of these old ditches have disappeared, but some still remain, examples of superior workmanship in primitive masonry. Following the mission era and during the early years of the American occupation, little attention was paid to irrigation. Nearly all of the great irrigation development in California has been accomplished in the twenty years since 1873, and most of it within a decade. Less than twenty years ago the upper San Joaquin Valley, inclusive of Kern, Tulare, Fresno, and Merced, was thought to be unfit for any better purpose than range for cattle and sheep during a part of the year. The township in which the city of Fresno stands was valued seventeen

AN OPEN RUNWAY.

without irrigation would be practically worthless for horticulture.

Irrigation in California had its first beginning in the establishment of missions by Spanish priests, from 1770 to 1783. Sixty years ago there

years ago at only $23,000, while now, because of irrigation, its value is more than $10,000,000. Irrigation in Fresno County has created not less than $20,000,000 of substantial values.

Little over a score of years ago the Riverside tract in San Bernardino County was assessed at about seventy-five cents an acre, and complaint was made of this by the owner as an over-valuation. Now the realty embraced in the same tract is worth upward of $5,000,000, including a thriving town of about 6,000 inhabitants—all the direct result of irrigation. Four thousand acres of irrigated Riverside lands have produced in one year 1,000 carloads of oranges and 225,000 boxes of raisins, worth, collectively, upward of $1,000,000. The orange shipments from Riverside in 1893 have amounted to 2,300 carloads. More than 7,000 persons are living on the irrigated Riverside tract, which in 1870 was a treeless, barren, uninhabited plain. Now the San Bernardino Valley is dotted with prosperous and beautiful horticultural settlements or colonies, created through irrigation. Some of these vie in loveliness with Riverside, whose miles of shady avenues and orange groves have made it famous as one of the most charming places in the world. Ontario, Redlands, Pomona, Pasadena, and many other noted centres of horticultural beauty in Southern California owe their prosperity and fame to water. But for irrigation in Southern California Los Angeles would to-day be little more than a sleepy Mexican town, instead of a bustling, ambitious city of 70,000 inhabitants, of world-renown for her attractions. It was the unexampled prosperity resulting from irrigation that gave rise to the great Southern California boom, which collapsed about five years ago, and it was irrigation that enabled this division of the State to pass safely through the ordeal of readjustment. Values had been largely inflated, but there was no mistake regarding the certainty of continued growth and development through irrigation. Many of the best and most costly improvements in Los Angeles and in other parts of Southern California have been created since the boom, and capital continues by investment to demonstrate its faith in the future of the chief city and the surrounding territory.

It would be a mistake to infer that Southern California as a whole is unproductive without irrigation. The county of Los Angeles alone produces each year wheat and barley to the value of more than $1,000,000, without irrigation; also large quantities of corn, deciduous fruits, alfalfa, and root crops on soil needing no irrigation. In fact, save that the soils of Los Angeles and Orange counties are in general of a more open or friable character than those of the Sacramento Valley, there is no more need of irrigation in these southern counties than in the county of Sacramento, there being no great difference in the average rainfall of the two districts compared, and Los Angeles having the advantage of proximity to the sea. But what may not be necessary is often highly desirable, and the farmers and horticulturists of the country about Los Angeles have learned how to use water to the best advantage in increasing productiveness of the soil and for the growth of the most profitable crops and more of them than could be had without irrigation. In some localities irrigation enables the farmers to get in rotation during a single year a crop of barley hay, another of potatoes, and another of corn, while six cuttings of alfalfa during twelve months are by no means uncommon. The production of early potatoes and other vegetables on irrigated lands fills thousands of cars each year for shipment to the Eastern markets. With lower rates of transportation, this production of early vegetables for Eastern shipment promises to become as great a source of income to this part of the State as the citrus fruits now are.

Irrigation works in California consist of storage reservoirs, canals, artesian wells, submerged or bed-rock

dams, tunnels, and pumping systems. The storage-reservoir system is employed in Southern California to a much greater extent than in other parts of the State, while the greatest development of the canal system, taking water directly from river channels, is seen in the southern part

mountains. They are fed by streams and the storms of winter, and in summer receive large volumes of water from the melting of snow on the peaks and ridges above them. The Arrowhead system, in course of construction, will consist of three reservoirs, to contain sufficient water

AN ARTIFICIAL BROOK.

of the San Joaquin Valley, in the counties of Fresno, Kern, Tulare, and Merced. Among the chief storage works are those of the Bear Valley, Hemet Lake, Arrowhead, Sweetwater, and Cuyamaca systems, in San Bernardino and San Diego counties. These reservoirs are all of large capacity and are situated in the high

for the irrigation of 80,000 or 90,000 acres, and will cost $1,000,000. The Bear Valley works constitute the largest storage system of irrigation in the United States Its distributing system is regarded as the best and most economical in use, consisting of pipe lines. This system supplies water to the town and colony of

BEAR VALLEY LAKE.

Redlands, where upward of 4,000 people are occupying a tract of land that had but one house nine years ago. In this locality unimproved land commands, through irrigation, from $300 to $500 an acre, while bearing citrus orchards at this place and Riverside bring upward of $1,000 an acre. Some orange orchards at Riverside have brought as much as $2,000 an acre.

The water used for irrigation at Riverside is derived partly from canals heading in the Santa Ana River and partly from artesian wells whose flow is conducted to the colony tract. In the neighborhood water is likewise developed by means of tunnels or "horizontal wells" bored into the hills or mountains to tap hidden sources of supply. A number of such tunnels have been successfully driven in other localities of Southern California. In a region where the right to a constant flow of water is valued at $1,000 a miner's inch, such costly work is well rewarded when a good flow is obtained. When economically used, from cement pipes and ditches, an inch of water may be made to suffice, as at Ontario, in San Bernardino County, for the irrigation of ten acres of orange orchard. This flow of water is equal to about 13,000 gallons in twenty-four hours, enough to cover one acre half an inch deep or to cover ten acres eighteen inches deep in one year. And it is to be observed that the control of water-supply, enabling the cultivator to apply the water only when needed and in precisely such quantity as may be desired, makes this one miner's inch fully equivalent to thirty-six inches of annual rainfall as usually distributed from the heavens.

The irrigation works of Los Angeles and Orange counties, though numerous, are not severally of great magnitude. In several localities water is developed by means of dams constructed on the bed-rock of streams, so as to intercept the invisible flow through the cobbles and sand, and so divert it to ditches. Tunnels have also been successfully run under the beds of streams with the same object.

About all the visible supply of

water in Southern California has been appropriated for irrigation, but much more may be developed by means of storage systems or the other works mentioned. Water rights are commonly sold with the land that is or is to be irrigated, so that the buyer is in no danger of being deprived of the use of water. The same plan is followed in most other parts of the State in which irrigation is used. Riparian rights still exist, but the law recognizes the right of appropriation, and most of the difficulties formerly existing between riparian proprietors and appropriators have been adjusted by litigation or otherwise.

The principal development of artesian wells in California is in Kern County, though other counties also have many such wells. In Kern there are many wells which have a daily flow of from 2,000,000 to 3,000,000 gallons. Their average depth is over 500 feet. Thousands of acres in Kern Valley are irrigated by this means. In the Sacramento Valley borings have been made to as great a depth as 2,000 feet for artesian water, but no flowing wells have been developed, though an abundant supply of water is obtained in many localities by pumping from wells sunk from 15 to 150 feet, the water in some places rising nearly to the surface.

In Kern County there are 35 large canals, capable of supplying water to half a million acres. Of these the most important is the Calloway, which is 120 feet wide and from 6 to 10 feet deep. The magnitude of this canal may be better appreciated by comparing it with the Erie Canal, in the State of New York, which is 70 feet wide and 7 deep.

Fresno has 16 or more irrigation companies, taking water from the Fresno, Kings, and San Joaquin rivers. These companies have upward of 750 miles of main canals, constructed at a cost of $2,000,000 and "covering" 350,000 acres. Of the irrigated area in Fresno more than 75,000 acres are in vineyard, yielding raisins to the value of $100 or more to the acre annually. Under the Fresno canals there are upward of 20,000 acres in alfalfa, credited with the production of hay to the extent of $40 an acre each year.

One of the most interesting and important irrigation works in the San Joaquin Valley is the Crocker & Huffman canal and reservoir. Water from the Merced River is conveyed twenty-seven miles through a canal 100 feet wide and 10 feet deep to a reservoir constructed five miles from the town of Merced. This reservoir lies in a basin between hills, the natural outlet being closed by an embankment of earth and gravel 4,000 feet long, 275 feet thick at the base, and with a maximum height of 54 feet. This reservoir covers several hundred acres and holds 5,500,000,000 gallons, sufficient to irrigate 30,000 acres. The canal and reservoir cost $1,000,000. Water rights under this system have been sold at the rate of $10 an acre.

In Tulare County is an extensive system of canals supplying about 100,000 acres. In the new counties of Kings and Madera irrigation is making rapid progress, as in other localities of the State mentioned in this article.

One of the great helps to irrigation development in California is an act of the legislature known as the Wright law. This act provides for the organization of irrigation systems by the owners of lands susceptible of irrigation from a common source. It authorizes the issue of bonds, constituting a lien on such lands, to provide for the construction of waterworks or the purchase of water rights; also provides for a system of district taxation to redeem the bonds and for the payment of interest thereon. Under this law land-owners are enabled to obtain irrigation at its actual cost. Thirty districts organized under this act embrace more than 2,000,000 acres, valued at $45,000,-

000. Bonds have been voted in these districts to the extent of about $13,000,000, of which about $5,000,000 have been sold. The cost of developing water under the district plan varies greatly, according to the situation of the lands to be irrigated. The average has been estimated at about $6 an acre. A very slight annual tax usually suffices to maintain the works in proper condition and to pay the cost of distributing the water.

It has not been practicable within the limits of this article to more than touch the outlines of this great subject of irrigation in California. Though much has been done, it is safe to say that irrigation is still in its infancy in the State. Rivers of water in Central and Northern California are suffered to run idly to the sea. These waters, if used only in part for irrigation, would multiply many times the productiveness of the soil, permit great diversity of crops, compel subdivision and settlement of large tracts now held by absentee owners, prevent exhaustion of fertility, and furnish means for the rapid growth of villages, towns, and cities. The chief obstacles in the way of irrigation are ignorance, prejudice, and inertia. People accustomed to farming without water are apt to think there is no better way. But the man who has farmed with irrigation knows there is no other way of agriculture so productive and secure. He prefers control of water-supply to reliance upon rainfall, with its attendant risks and anxieties.

BEAR VALLEY IRRIGATION COMPANY.

MOTHER OF J. J. GLOVER.*

FATHER OF DR. DEAN CLARKE.*

SPIRIT PHOTOGRAPHY.

BY DEAN CLARKE, M.D.

MOTHER OF DR. DEAN CLARKE.*

IN the September, 1892, issue of the CALIFORNIAN MAGAZINE, Dr. Elliot Coues presents an interesting essay under the caption "Can Ghosts be Photographed?" After considerable circumlocution about the nature of ghosts, the various ideas entertained regarding them, and the several means that have been devised to evoke and hold intercourse with them, he says: "Among the means used to take ghosts in the very act of their ghostlings is photography." He affirms that he has examined hundreds of alleged spirit photographs, but is not yet committed to the theory that they are real pictures of decarnated spirits. "If I do not believe it," says Dr. Coues, "neither do I disbelieve it; I neither affirm nor deny it. I am simply agnostic; I do not know. I do not deny the possibility of spirit photography. Direct and demonstrable evidence in my own person I lack. I have been shown many ghost pictures which were said, and fully believed by the sayer, to be genuine. But I have yet to see one which, when I had ascertained all the facts in the case, did not prove to be bogus—a mere sham; a trick of the operator—in a word, a fraud." After making this forcible declaration, the doctor mitigates it somewhat by saying: "Yet the reader must not be misled into hastily assuming on the strength of this that spirit photography is all a delusion and spirit photographs all fraudulent." A fair and candid concession surely, but as the writer devotes the greater part of his article to exposing the "shams" he has seen, his witness seems to the average reader to be substantially on the negative side of this question.

Although the evidence presented in this case is all second-hand, and therefore would be ruled out of a court of justice, yet "the fraud" is apparent *on the face* of much of it, and the honest truth-seeker should thank him for this showing-up of those shameless impostors who have counterfeited what hundreds of intelligent investigators know to be a reality, by rigid personal experiment.

* The portraits above are taken from life. The subsequent "spirit photographs" bear a striking resemblance to them.

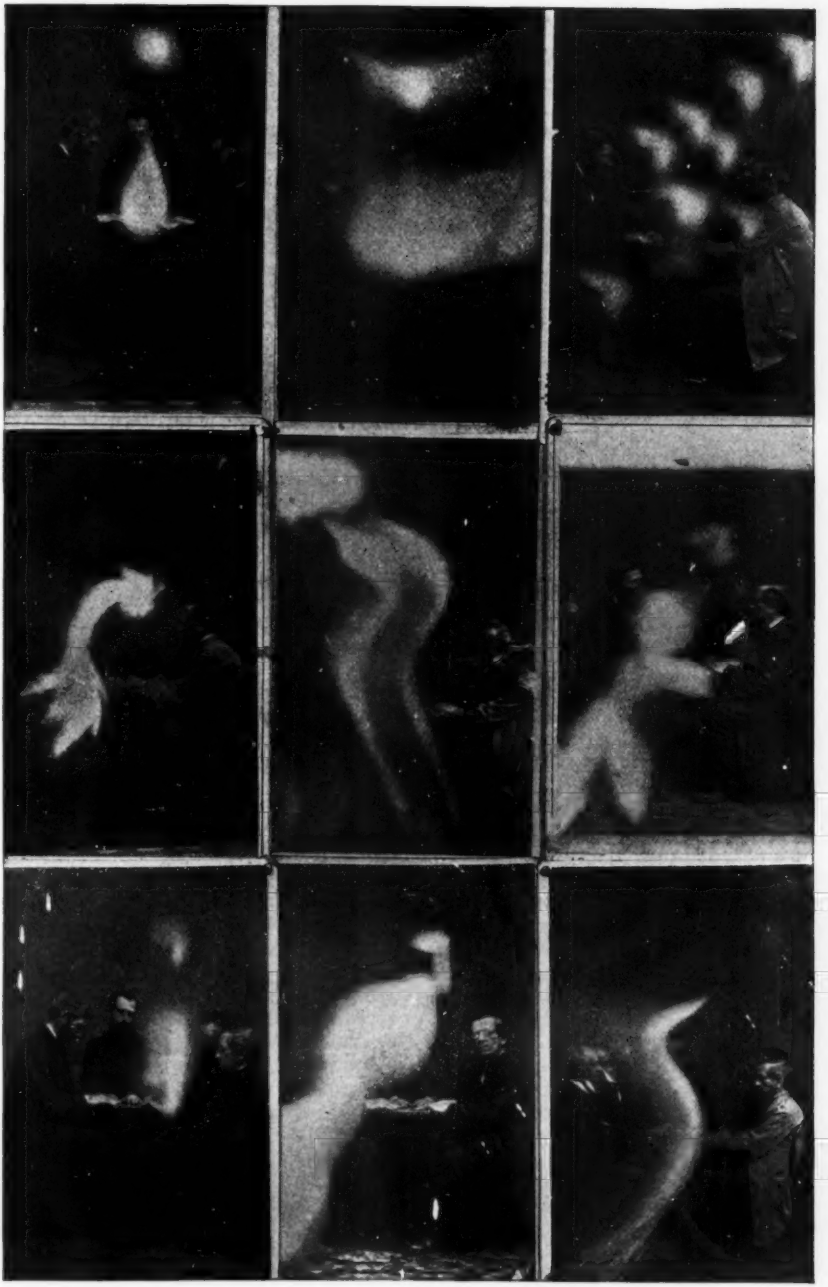
The question: "Can ghosts be photographed?" is not an idle one; it has a profound significance. Its affirmative demonstration scientifically settles another, the most momentous ever asked, viz., "If a man die shall he live again?" "To be, or not to be," is no longer a question with those who are sure they have obtained genuine spirit photographs. But as there are comparatively so few people who have been thus blessed, and as there is so much of bogus material extant, it becomes necessary to present very positive proof to reasonable doubters that all are not such as Dr. Coues has so amply illustrated.

Fortunately, among many others whose testimony he has personally received, the writer of this article has had opportunities to test this matter by careful experiments, which will be detailed after adducing other important testimony.

Dr. Coues cited what he admitted to be strong testimony in support of the reality of spirit photography from the distinguished naturalist, A. R. Wallace, F.R.S., but he gently hints that Professor Wallace's test evidences of genuineness are not invulnerable. In fact, he questions the validity of all by saying: "I am convinced that every so-called 'test' of genuineness can be fraudulently imitated to perfection." After making this sweeping declaration he quotes Professor Wallace from the *Arena* as saying: "At all events, it will be admitted that an experienced photographer who supplies the plates and sees the whole of the operations performed, or even performs them himself, cannot be so deceived. This test has been applied over and over again!"

In his able "Defence of Modern Spiritualism," page 41, Professor Wallace further says: "The test of clearly recognizable likenesses of deceased friends has often been obtained. Mr. Wm. Howitt, who went without previous notice, obtained likenesses of two sons, many years dead, and of the very existence of one of which even the friend who accompanied Mr. Howitt was ignorant. The likenesses were instantly recognized by Mrs. Howitt; and Mr. H. declared them to be 'perfect and unmistakable.' Dr. Thompson, of Clifton, England, obtained a photograph of himself, accompanied by that of a lady he did not know. He sent it to his uncle in Scotland, simply asking if he recognized a resemblance to any of the family deceased. The reply was that it was the likeness of Dr. Thompson's own mother, who died at his birth; and there being no picture of her in existence, he had no idea of what she was like. Many other instances of recognition have occurred, but I will only add my personal testimony. A few weeks back I myself went to a photographer and obtained a most unmistakable likeness of a deceased relative." What more conclusive "test" could Professor Wallace or Dr. Coues ask than the above? If Dr. Coues had read this positive proof of genuineness from Professor Wallace, no wonder that it gave his sense of the amenities of hospitality a twinge to say "it can be fraudulently imitated to perfection."

In his extensive travels as a lecturer through thirty-two of the United States, the writer has learned of many cases of spirit forms appearing, sporadically as it were, on the negatives or plates of artists who knew nothing of and believed nothing in spirit photography till such forms unaccountably appeared. In two cases of this sort, where these forms persisted in appearing against every effort to prevent, the artists, who were educated in superstitions, abandoned their business, believing that "the devil was in it," as they said. Prof. W. D. Gunning, a distinguished lecturer on geology, relates an instance coming under his observation in 1867, where a spirit hand appeared on the photograph of a



EXPERIMENTS OF A SCOTCH SCIENTIST IN PHOTOGRAPHING GHOSTS.

young girl. He says: "While sitting before the camera she was smitten with partial blindness. She spoke of it to the artist, who told her to 'wink and sit still.' In developing the plate he noticed an imperfection, but did not observe it closely. He posed the girl again and took a sheet of eight tintypes. She felt no blur over her eyes and there was none on the pictures.

"The artist now examined the first sheet, and found hands on the face and neck of every tintype, eight in all! I have examined four of these, and find the hands in precisely the same position on each picture. Now the artist affirms that no human being but himself and the girl was in the room. He has no theory. What, then, shall we say? The theory that the plate was an old one and the hand had been photographed there before is absurd. As well talk of making an Iliad by throwing down a ton of type at random!" Other explanations he rejects as equally unsatisfactory, and says: "The best part of my life has been spent in the study and interpretation of science; and, in all humility, I should be able to weigh and interpret facts so simple as these. . . . Our loved ones now and then lift the veil and reach forth a hand from out that world of light and beauty—from that world a hand clothed with the elements of this; and art, in her new era, ministers again to our hope of immortality."

Thus positive was Professor Gunning of the reality of spirit photography.

Among the frauds in spirit photography, Dr. Coues classes W. H. Mumler, of Boston (now in spirit life), saying: "Mumler seems to have been the pioneer in this kind of fraud," etc., and characterizes his work as "very stupid impostures which should deceive no one." He further states that in 1869 he was arrested in New York and tried for swindling "on the charge of obtaining money under false pretences, but got off by some means." That Dr. Coues has "counted without his host" of evidence to convict Mumler of his charges we shall now proceed to show. Mr. Epes Sargent, a distinguished littérateur of Boston, once formed a similar "snap" judgment concerning Mumler and his work, so we will quote what he says in his "Proof Palpable," page 221: "In the second edition of 'Planchette' I expressed some doubt of the genuineness of the spirit photographs obtained through Mr. Mumler. . . . Having satisfied myself by abundant testimony that Mr. Mumler has been instrumental in producing genuine spirit photographs, I stated the fact, and in a third edition of 'Planchette' withdrew the charge of fraud. Renewed investigation has satisfied me that many genuine spirit photographs have been produced through his mediumship, and I am happy to have my opinion confirmed by Mr. Gurney, the experienced photographer of New York." He cites a conversation of Mr. Gurney with Dr. Eugene Crowell, of Brooklyn, N. Y., who says: "Mr. Gurney took clean plates and examined them with closest scrutiny, and prepared them for the camera. The camera itself he took apart, examined the interior, the object-glass, etc., and when all was prepared for taking the picture—a friend of Mr. Gurney being in the chair—Mr. Mumler placed his hand upon the camera, the lens was uncovered, and in a minute or two the photograph was taken. Upon proving the negative, a spirit form was visible beside the likeness of the sitter. The process was repeated with like results, Mr. Gurney managing everything from beginning to end, Mr. M. not touching an article, excepting when he placed his hand upon the camera at the moment of taking the picture.

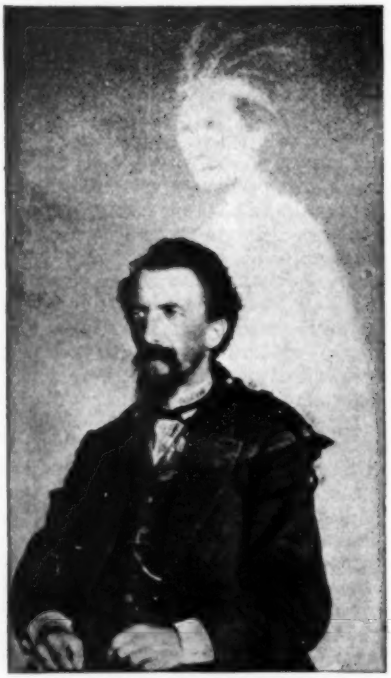
"Mr. Gurney, some time afterward, providing himself with plates and chemicals of his own, visited Boston again, went through the process, using his own materials, with similar

results. He spent some hours in scrutinizing everything about the room and everything pertaining to the process, and he was perfectly satisfied there was no deception."

It would seem that such testimony as this from the oldest photographer in this country ought to give Dr. Coues another "twinge" for his hasty judgment of Mr. Mumler! In addition to this, the writer had the personal testimony of Mr. Gurney, whom he met at his gallery on Fifth Avenue, New York, in 1873. During a two-hours' conversation regarding this subject, Mr. Gurney told him that at the time of Mr. Mumler's trial he, together with five other experts in photography, prepared everything in readiness for taking a picture in Mr. G.'s own gallery. Then they led Mr. Mumler into it with his arms folded, and while he stood thus beside the camera, touching nothing, they obtained spirit photographs of persons that were unmistakably recognized; and it was these photographs, presented to the judge, which caused him to dismiss the case from the court. Right here it may be well to introduce Mr. Mumler's sworn statement made in court.

It is as follows: "In 1861, in the city of Boston, while engaged in business as an engraver, I was in the habit of visiting a young man who was employed in a photographic gallery kept by a Mrs. Stewart in Washington Street. Occasionally I would experiment with the instrument and chemicals. One Sunday, when entirely alone in the gallery, I attempted to get a picture of myself, and then it was that I first discovered, while developing it, that a second form appeared on the plate. At this time I had never heard of spirit pictures, although I had been somewhat interested in the doctrine of spiritualism. At first I labored under what is now the general impression, that the plate upon which the picture was taken could not have been clean, and that the form which showed itself beside my own must have been left on the glass, and so I stated to my employers and others. Subsequent attempts, however, made under circumstances which preclude such a possibility, have confirmed me in the belief that the power by which these forms are produced is beyond human control, and the experts that have been called by the people have failed to produce a picture made in that manner. I wish to state that at the time I developed the shadow or form above alluded to, I was a complete novice in the art of photography and had no experience whatever in the composition of chemicals used in the business, and that my use of them in my experiments at that time was simply in conformity to what I had seen my friend do while himself engaged in the business. After getting the form on the plate, at the suggestion of several friends to whom I showed it I made other attempts, and generally with most remarkable results. I then determined to leave my business and devote myself to photography. Before long the subject of spirit photography, and particularly of my success, became the theme of every tongue, and I was overrun with people of inquiring minds, and obliged to go through, over and over again, for their pleasure, the routine of taking and developing the pictures. For a long time I never refused any one who came to investigate; it soon became apparent, however, that I must either stop it or cease to support myself, for, as a general thing, these savants, while greedy themselves for intellectual food, seemed entirely oblivious of the fact that I myself was a material body. However, I can truly say that I have never refused intentionally any person who desired to have a picture taken from making every examination or inquiry they chose to make, and had I been in this examination allowed to have produced evidence from abroad, I could have shown by scientific men whose names

would have satisfied every one that the most careful and minute examinations have been made in all the details of my business while I have been engaged in taking pictures. I solemnly assert here that I have now but comparatively little knowledge of photography, or chemicals, or science of any kind, further than is needed to take ordinary photographic pictures. I positively assert that in taking the pictures on which these forms appear I have never used any trick or device, or availed myself of any deception or fraud in producing them; that these forms have appeared in each and every instance when they have been presented, without any effort, except my will power to produce them."



DR. CLARKE AND INDIAN CONTROL.

Many more testimonials from photographers and other scientific people who experimented with Mumler could be added by the writer, but want of space forbids, so he will now state his own experience.

In the autumn of 1871 I went to 170 West Springfield Street, Boston, where I found Mr. Mumler, and asked the privilege to test his powers to produce a spirit photograph for me. He readily consented to try, saying he could warrant nothing. He had no gallery, but used his parlor. I requested him to allow an examination of his instruments and to be permitted to see the entire process. He consented. I had him cut a new sheet of glass for the negative,

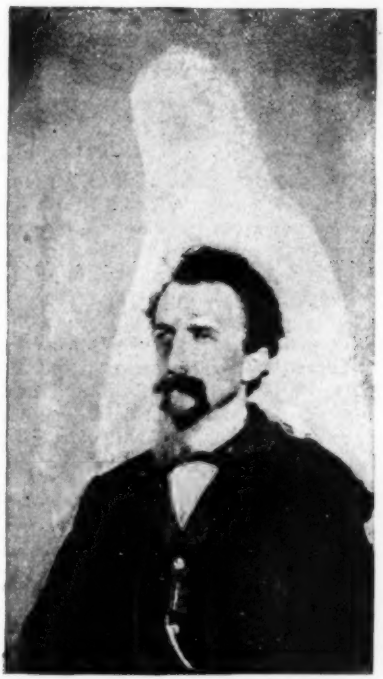
J. J. GLOVER AND MOTHER.

and I watched with eagle eyes every motion from beginning to end. Hoping to get a picture of my mother, if any, I fixed my thought upon her as I took my seat. But just as Mumler uncapped his instrument, the name Angeline was as vividly impressed upon my mind, as though

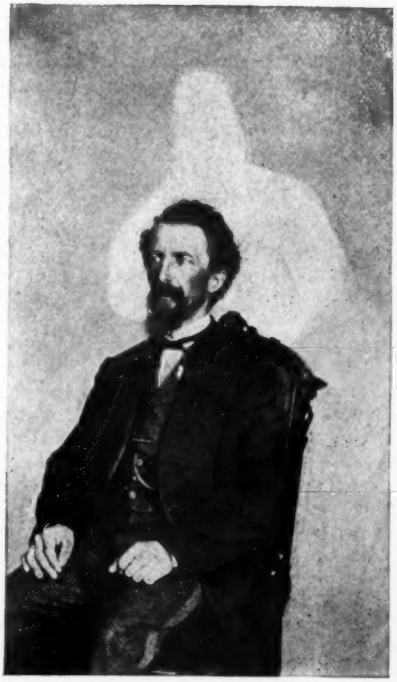
spoken audibly, three successive times. I followed Mumler into his closet and saw him develop the negative, and as soon as washed he held it up to the light and I recognized at first sight my cousin Angeline's likeness, as shown in plate.

She never had a picture of any kind taken of herself, but her family and all acquaintances have recognized it as correct.

On the following week, accompanied by Mr. John J. Glover, of Quincy, Mass., with whom I was stopping for a rest from public labor, I again visited Mr. Mumler, and he cheerfully allowed us to make a crucial examination of the room, apparatus, and all appurtenances. We then had him cut a new sheet of glass for the negatives, and, as I had done before, we both watched critically the entire process. I sat for my picture first,



DR. CLARKE AND SPIRIT MOTHER.



DR. CLARKE AND "ANGELINE."

and while the negative was dripping with water Mumler showed it to us, and I was overjoyed to see on it a clear likeness of my mother, who had been in spirit life about nine years. The only picture of her at that time was a daguerreotype in the possession of my father, in Vermont, one hundred and fifty miles away. That has since been photographed, and the reader can here see a copy of it by the side of the spirit photograph.

The artist then prepared another negative under our inspection, and Mr. Glover sat for his picture. Following him at every step, we saw the negative developed, and Mr. G. at first view recognized on it a perfect likeness of his mother as she appeared just before her demise, at over eighty years of age. On arrival at his home he gave me a photograph of his mother, taken just be-

fore her death, and I saw it was a *fac-simile* of the spirit photograph Mumler had just taken. A reproduction of this will be found on page 856.

After Mr. Glover had had his sitting I requested Mumler to let me sit again, to see if he could not get a more distinct picture of my mother. He assented. When the negative was developed, much to the surprise and chagrin of the artist, but greatly to my surprise and pleasure, a picture of an Indian instead of my mother was found on it. This was as great a test to me as though my mother had appeared again; for more than a score of clairvoyants in various parts of the country had described such a spirit as one of my guardians, and for seventeen years I had felt his healing magnetism, and often had been psychologically controlled by him to speak his language. One year afterward, in New York City, I met an educated Indian woman and was controlled by him to talk with her, before about fifty people, for over an hour. She interpreted what both had spoken, and informed me that it was the dialect of "the Delaware Indians." The reader can see this likeness on page 856. It is needless to say that when not under this spirit's control I know nothing of the language. The only verification I have of its correctness is the recognition of many clairvoyants who have seen both the spirit and the photograph, and also my own strong impressions from the spirit himself, which, of course, are not *proof* to others.

After getting the negative of the Indian, Mr. Mumler, who had been so flustrated and disgusted at his appearance, proposed that I should sit again, to see if my mother would not appear, as he was desirous that I should have complete satisfaction. Another negative was prepared, and when developed, instead of another picture of my mother, a beautiful hand was seen above my head, holding a large rose over my forehead. This was another disappointment, but not so much so as the accident that soon followed, when, as Mumler was drying it by a lamp, it flew into pieces and was lost entirely. I shall always carry a memory of it, however, for a few years afterward I revisited my nativity, and one day, going to the grave of my cousin whose spirit photograph I had obtained, I found on her grave-stone a carved hand and rose exactly like the one shadowed on that negative. I had seen it years before, but had entirely forgotten it.

I will here say that previous to the two visits to Mr. Mumler, already described, I had met him but once, and he knew nothing of my family connections.

Mr. Glover also informed me that Mr. M. had no likeness of his mother, and even if he had one, our visit was unexpected and he could have made no preparation to deceive us. Besides, we gave him no opportunity whatever to do so had he been so inclined. If such evidence as we then obtained does not overwhelmingly prove the genuineness of spirit photography, none has ever been given. We were both familiar with the various methods by which counterfeits are produced, and took special precautions that Mumler should have no opportunity to use them if so disposed; but it is simply justice to him to say he cheerfully gave us every opportunity to detect any attempt at deception we desired. For his sake, I trust this evidence will give the conscience of so eminent a man as Dr. Coues just enough of "a twinge" to cause him to acknowledge that his condemnation was just a little "too previous." Doubtless no one will be more glad than he to have spirit photography thus demonstrated.

In 1863 Andrew Jackson Davis, the great seer, while editing the *Herald of Progress*, engaged Mr. Wm. Guay, a practical photographer, to test Mr. Mumler, and here follows

the result as given in Mr. Guay's own words:

"Having been permitted by Mr. Mumler every facility, I went through the whole process of selecting, preparing, coating, silvering, and putting into the shield the glass upon which Mr. M. proposed that a spirit form should be imparted, never taking off my eyes and not allowing Mr. M. to touch the glass until it had gone through the whole of the operation. The result was that there came upon the glass a picture of myself, and to my utter astonishment, having previously examined and scrutinized every crack and corner, plate-holder, camera, box, tube, and inside the bath, etc., another portrait. Having since continued, on several occasions, my investigations as described above, and received even more perfect results than on the first trial, I have been obliged to indorse its legitimacy.

"WM. GUAY."

Another photographer, Mr. H. Weston, 31 Providence Street, Boston, gives similar testimony. In fact, such evidence is cumulative *ad libitum*. While in Boston, after obtaining my spirit photographs, I called on Mr. Moses A. Dow, editor of the *Waverley Magazine*, and he showed me a spirit picture he had obtained of an adopted daughter by the name of Mabel Warren. She communicated to him through a medium requesting him to go to Mr. Mumler and she would endeavor to give him her picture. He went as directed, giving his name to Mr. M. as Mr. Johnson. The result I will give by copying a letter he sent to Mr. Mumler:

"BOSTON, Jan. 20th, 1871.

"MR. MUMLER:—On Saturday last I found a packet from you in the post-office in which was inclosed the proof of my negative. It is perfectly satisfactory as regards a likeness of my friend. She told me at 12 o'clock last Thursday, through a medium, that she would stand by my side, with her arm on my shoulder and a flower in her hand. If you will look over my left shoulder you will see faintly the impress of her hand with a flower.

"I will drop the name of Johnson and give you my true name. With much esteem,

"MOSES A. DOW."

Mr. Dow informed me that he obtained the spirit photograph in half an hour after he got the message. The writer has been informed that unmistakable spirit photographs have been taken by one of the leading photographers in San José but a few months since. The photographer first tried to conceal the fact. Similar reports are made of a photographer in San Diego, and very recently the *Spiritual Press* is giving reports of this wonderful phenomenon taking place with a Miss Della Admen, of Helena, Montana, who, it is said, gets accurate spirit likenesses of the friends of whoever will send her a lock of their hair. A Mrs. Carter, of San Francisco, advertises to take these photographs, but as the writer has never investigated her work, he is not prepared to express an opinion concerning it, other than that some specimens he has seen look quite similar to Keeler's work which Dr. Coues has exhibited. If the reader will thoroughly scan and weigh the facts and testimony already given, a further presentation will be superfluous. One such photograph as that of the writer's mother ought to "settle the question" beyond doubt in every reasoning mind, and cumulative facts by the thousand which can be added are useless to convince those who "having eyes see not," because they will not. Every true scientist and philosopher and every Christian ought to rejoice that science and art have now so wonderfully combined to demonstrate objectively the fundamental claim of all religions, that man has a substantial existence after so-called death.

"TAM."

BY LILLIAN E. PURDY.

"Would that a man would arise in me,
That the 'woman' I am might cease to be."

SEATED around a rough table in a small log cabin were the forms of four persons whose attention seemed riveted upon a few cards that lay before them. The flame from a single candle furnished the only means of light in the room, and but for an occasional exclamation or chink of money one would have thought the apartment unoccupied.

My brother and I had been belated in the forest while on one of our long journeys in the Sierras, and were now enjoying the kind hospitality of an old miner and his son, whose cabin we had discerned through the thick timber when at a considerable distance away. They gave us a hearty welcome, provided a supper for us, and then invited us to join in a game of cards.

Our host was a genial fellow, full of life and cheerfulness. His long white beard and silver hair harmonized well with the soft brown eyes and even contour of his features. His generous spirit prompted him to offer us unhesitatingly the best his board could supply, the most comfortable seat his cabin could afford.

The younger man was presumably of a different character. He was tall, lean, and lank, and his ungainly, crab-like hands clutched avariciously at the coins whenever he held the winning cards. His keen, searching eyes, which I felt fastened upon me, aroused my suspicion at once, and I thought almost the instant I met his inquisitive gaze, "What if he should find me out?" But fear is not a part of my nature, so I soon succeeded in banishing the suspicion from my mind, and continued to win the little pile of coins that glittered on the rude table.

It is surprising with what fortune I play cards. Mine is always the winning hand. With no difficulty at all, the stakes always come to me.

Whenever I spoke, which I tried seldom to do, I noticed his piercing eyes flash, a shadow steal over his dark, malicious countenance. Yes, I surely am detected. My voice betrays me, although my short hair, rather large features, and masculine manners are a good disguise. There is not one in a hundred who could know that I am a woman!

The male attire which I have worn for the past year has become so much a part of me that my brother, Vance, is often led to say, "Tam, you fill your clothes like a man." However well I fill them, I try to make them appear like those worn by the mountaineers.

A pair of dark corduroy trousers, supported at the waist by a buckskin belt, are tucked into my yellow, laced hunting-boots. Above this, I wear a light flannel shirt, and my crowning glory is a tan sombrero with a band formed by a rattlesnake skin, a relic of one of the many snakes I have killed.

A Colt revolver is my nearest companion, and is carried in my hip-pocket. More than once it has saved me from the attack of wild animals who have always fallen at my shot, for my aim never fails, my hand is wonderfully steady, and my judgment of distance accurate. The best mountaineers have been amazed at my shooting, and have been forced to speak a word of praise.

I remember that one time, during a tramp, we chanced into a town in which a shooting-gallery seemed to be the chief attraction. Several groups of idlers loitered about, observing the game that ensued between two or three blundering marksmen, when Vance, proud of my unnatural superiority in the masculine sports and pastimes, proposed that I should have a hand in the game. I shot, and lo! could ever marksman have made a more clever hit!

"Hurrah for you, Tam!" shouted Vance enthusiastically, and in an instant the voices of the men rang out in a mighty chorus of cheers for "Tam."

My brother Vance is a good-natured fellow, strong, hearty, not particularly intelligent, and, like the family into which I was born, quite ordinary. I shall not bore you with a description of him, for he is only a fair sample of the majority of his sex.

But to return to the cabin in which you first found me: after several games of cards, in which I won all the stakes, Vance and I spread our blankets in separate corners of the cabin allotted to us by our host. At daylight we rose, rolled our blankets and lashed them on our pack-mule, then turned our attention to the mules we rode. My sturdy little animal fairly howled under the pressure of the cinch, as I jammed my knee into him and pulled the latigo strap with all the strength I could command. After shaking hands with our host, who, with bland, smiling, sunburnt face stood without the cabin door, and after nodding to the dark-browed son, I swung into the saddle and spurred up the hill, leaving Vance to attend to the pack-animal and follow, as was the custom. Somehow, as this all happened, a vivid recollection came to me of a former experience similar in nature; yet my human memory can recall nothing coincidental.

Now, you may wonder at the roving, unwomanly life I lead. But it is through a perfect uncongeniality with everything that pertains to woman, my sympathy only for that which is masculine—in short, my mannish nature, strong, robust physical frame, and unfeminine tastes—all these have led me to pursue the life of the forest instead of that of "the city," for which I have been trained and educated. Perhaps my natural aptitude for study and my early display of a sort of mysterious knowledge rather awed my parents into allowing me a college education. However this may be, I was well educated, while my athletic tendencies were constantly crushed until my very existence was one of unrest, dissatisfaction, torture. And so finally, like a bird freed from its cage, I flew with my brother to my element, the mountains, where, in order to escape comments and hampering from skirts, I assumed the disguise of a man, and travelled many a jolly mile through the densest forest and most deserted wilds. Yet am I remembering, remembering!

We climbed to the top of a ridge of pine-covered mountains, and had begun to descend the almost perpendicular height on the opposite side. My sure-footed Ajax slipped, the saddle-girth broke, and before I had time to collect my thoughts, I plunged forward over the animal's head and landed twenty feet beyond, rolling a few feet farther until I reached something to which I might cling.

"Tam, oh, Tamarack!" screamed my brother in a huge tone, which sent my mountain name echoing and re-echoing through the canyons.

"All right," I returned fearlessly, for I was merely surprised and not even "shaken up" by the fall.

Vance was by my side when I returned to faithful Ajax, who stood transfixed on the spot.

I raised the saddle from the ground, slung it over my shoulder, and led Ajax down the mountain to the canyon below, where repairs were soon made and our journey resumed.

That evening we camped in a small grove of maples that spread their umbrageous branches protectingly about us, intercepting the strong moonlight that fell in patches beneath. How delicious the calm, clear, moonlight night, with only the trees and the stars for a canopy, the mossy bank for a bed!

Inconsistent as it may seem (though I am inconsistency itself), I have formed the habit of carrying in my pocket a note-book and pencil, which I use in giving vent to the throng of thoughts that crowd my mental gaze, of massive stone bridges, colossal arches, and last and most prominent, spacious arenas, full of the odor of delicate perfumes, sweet strains of music floating in the air, while men clad in armor march in pairs before an excited populace. The signal is given—the gladiators begin the combat. Emperors, magistrates, and scholars are among the combatants. One stout, muscular man seems always to tower above the others in strength, for every one falls under his mighty hand. Deafening shouts from the frenzied people only encourage his bloody work. I am filled with fire—the vision is too real, I can look no longer! Then a sad, sweet voice continually whispers in my ear a song of a better life, a lesson of something true, something infinite. I think deeply and long; and the more I meditate, the more definite do my thoughts become. And what seems stranger, nothing is altogether new, for I am apparently picking up only what seems to belong to me by nature. Now I use my book for jotting down all that comes to me by vision or by what appears to be "memory" or a "recollecting." I employ only the evening for this kind of occupation—when Vance lies lazily near our roaring camp-fire thinking, or, more likely, dozing.

The moon was so strong, the air so warm, that the small fire we made for preparing our supper sufficed for the night. I gave myself up to revery until a late hour, when, overcome with sleep, I "turned in."

Following our rule, we left the grove of maples just at the break of day. On and on we travelled, riding our patient mules, with little of interest to mark the day, until, emerging from a thicket of dense undergrowth, I saw a panther crouched about ten yards before me, just about to spring, his eyes gleaming like two balls of fire. With the rapidity of lightning I stopped my mule, reached for my rifle, which I had that morning swung across my shoulder with the anticipation of killing some game for dinner, took rapid aim and fired. One terrific cry, and the animal lay dead before me. The bullet had passed through the left eye, penetrating the head. I had dismounted from my mule and was examining my victim, when Vance came up.

"Hello, Tam, what have you there?" he asked, eying the panther that lay sprawled upon the ground.

"Only a panther," I laughed, "that would have put an end to your Tam if she had not taken your advice and carried her rifle."

We camped at this point and prepared a noonday meal. In the middle of the afternoon we proceeded onward, never ceasing our rather rapid pace until darkness surrounded us, when, 'mid the grateful cool of the evening, we partook of a light supper in a shady nook and built a cheerful log fire.

The warmth and comfort of our new camp soon overpowered Vance, who fell into a doze before we had been seated ten minutes. I was writing.

A rustle of leaves behind caused me unconsciously to drop my pencil, place my hand upon my hip-pocket, and turn my eyes in the direction of the sound.

"Vance," I whispered, when the noise grew nearer and nearer every instant.

Accustomed to rousing himself at the slightest provocation, Vance

opened his eyes and was on his feet instantly.

We peered forth into the darkness, but could discern nothing.

"Excuse me," at length spoke a rather gentle voice, as a man finally appeared before us. "I have lost my way. Can you tell me what direction N—— is from here?"

"You are 'way off the track," replied Vance quickly, at the same time scanning the stranger from head to foot. "N—— is twenty miles south of here."

"Thank you," said the man, and was just about to turn away, when Vance interrupted:

"But stay with us until daylight. You are perfectly welcome to the best we can offer you."

"No," said the stranger, calmly though decidedly, casting one long, lingering look into my face. "I am due at N—— early to-morrow morning and must cover some of the ground to-night. My man has charge of my mule-train and packers about three hundred yards below. I saw the light from your fire and came to seek information. Thank you." And he vanished as quickly as he had appeared.

I had stood motionless and speechless during this brief dialogue between my brother and the stranger, and had caught his eye but once. But in that glance spoke volumes!

I cannot explain the sensation that almost overwhelmed me. I seemed to be struggling for expression, but words would not come; I seemed to be gasping for breath, but a stifling atmosphere surrounded me; I seemed to be striving to call the man's name, but nowhere in my memory could I find his proper appellation; I felt that I knew him, yet was positive that I had never before looked upon his face.

All these thoughts and feelings flew through my mind in a perfect whirlwind; and when the stranger was out of sight and hearing I still stood like a statue with the gleam from the fire lighting up my pallid face and staring eyes.

"Tam," said Vance in alarm, "what is the matter with you?"

"I do not know," I replied, endeavoring to conceal my emotion.

"Fie, Tam," he continued, forcing a jovial tone, "you were frightened. This is the first time I have ever seen you grow pale at a strange sound or man."

"Nonsense!" I returned, and we settled again into a silence. We were undisturbed the remainder of the night.

But just as we were about to "dig out" at daylight, the same fair stranger revisited our camp, giving as an excuse for his reappearance that an accident had happened to his favorite mule.

Apparently fatigued, he threw himself upon the ground in a half-reclining position, resting his head upon his hand. The growing daylight revealed a comely form, rather delicate than sinewy, and a face that was almost effeminate, so regular were the features and softened the expression. Yet there was a strength to his face. The eyes were blue and expressive, the light hair fell in waves about his forehead, while firmness spoke in the lines of the mouth, which was partly concealed by a light mustache.

We had greeted our guest and had listened to the story of the accident. Vance, remembering some work he was doing preparatory to our departure, left me alone in the august presence of our visitor.

I had hitherto remained silent, and now shrank from speaking, as I feared my voice would hardly pass undetected by one whose scrutinizing eye had more than once been fastened upon my smooth, beardless face. There was something inspiring about this man, yet I felt a certain freedom with him, for it seemed as if we were not strangers.

After a long pause, he broke the silence by remarking: "There is

something in your face and manner most familiar to me."

"Indeed," I said, assuming surprise.

"Yes, I feel as if we had met before, but I cannot recall the place. However, I am not infrequently meeting people with whom I seem to be thoroughly acquainted, so I am not greatly surprised. My faculty of detecting resemblances may have led me into error."

"Perhaps," I said, then ventured to add, "though our first impressions are not always groundless."

The stranger fell to thinking. At length he resumed the conversation:

"And may I ask where you are bound?"

"My brother and I are only on a tramp through the mountains. We tire of the city and enjoy nothing more than a few months 'roughing it' in the Sierras. I love the freedom of the mountains, and only in this kind of life do I find sympathy and happiness."

"Yet are you not compelled to undergo a mental starvation in a roving mountain life?"

"In one way, yes; though the groves and the cliffs, the streams and the canyons all breathe their lesson of truth. My thoughts find food in what I see and in my recollections."

"Your disposition is an odd one," he said, looking steadily into my face, "and you interest me."

I moved from where I was standing and threw myself into a man-like attitude upon a log near by the stranger.

"Pray, what do you mean by your recollections?" he asked.

"That I can hardly explain. A never-ceasing train of thoughts and pictures, familiar, yet not 'placeable,' if I may use the term, is passing through my mind. Vivid and real, they seem a part of my own life, yet in no way can I link them with the present. These visions entertain me for many an hour, and although I live in the mountains, my thoughts are hardly those of the common mountaineer."

"But what is the character of the pictures?" he asked, with a serious expression upon his face.

Glad to unburden my mind to a sympathetic listener, I said: "One vision that seems almost to haunt me is that of a beautiful garden, containing romantic walks through vine-entwined trees and dense shrubbery. In one turn of the walk an open space through the foliage reveals a lake of clear, blue water. Sometimes it is night, and the moonlight streams down upon the smooth surface of the water in a sheet of silver. But always do I see that same couple, perhaps lovers, strolling about arm in arm. At first this vision was extremely vague, but now it has become so real that I almost feel as if I were that man, so thoroughly do I seem to know him and understand him. How absurd, though, for me to be repeating something that is probably only the result of a strong imagination!"

I stopped to glance at him and was amazed to note the expression of his face. He was ghastly! In his eyes was a penetrating look, his head was bent forward, and he seemed to devour every word I uttered with the voracity of a starved animal.

"I sometimes think I hear him speak the name of the lovely woman by his side," I continued, apparently paying no heed to the change in his appearance, though I was almost overpowered by a conflict of emotions. "He calls her——"

"Hypatia!" he interrupted, starting convulsively, and only then, as he took the word from my mouth, did I detect in his face the very picture of the woman in my vision.

It was with the greatest effort on my part that I gained sufficient control of myself to hide my surprise and emotion; and I could readily understand, by the contortions of his once placid face, the difficulty under which he labored to conceal his

thoughts and account for the name that seemed accidentally to have escaped his lips.

"My dear friend," said the stranger, rising and reseating himself by my side, "I thoroughly understand your mental condition, and it is only through years of patient study that I have solved the great mystery that is presenting itself gradually to you. Those waking dreams *are* a part of your life—they belong to you, and are only remembrances of a former life. Each new incarnation produces its causes and endures its effect, and like the snowball rolled upon the snow-covered ground gathers to itself its kind—constantly heaping up experience upon experience. The spiritual ego passes through many stages of development before it has gained sufficient experience to enable it to carry from one terrestrial life to another the impress of that life's events. But our environment is often such that, even though our psychic powers have been formerly cultivated, they seem dead until something happens to develop them, when they burst upon us in a perfect torrent. In this way may be explained 'genius,' which is nothing more than the sudden exhibition of a power of displaying what is in the soul acquired by former hard and bitter experience. We are creatures of circumstance in so far as we create our own circumstances—not in one life but in many successive reincarnations—by good and by evil doing, always paying the penalty for the one and reaping the reward from the other; and it is only by patience and forbearance and development of thought power that we may be led to the light, that Nature will reveal her secrets to us, that our eyes may be opened to the truth."

"I have thought on these subjects," I said, "but my thoughts were vague and indefinite. As you speak, the truth dawns upon me. There seems to be, though, a strain of mysticism in what you say."

"I do not doubt it. I am more or less of an occultist. My progress in study is greatly impeded by my surroundings and circumstances. However, I try to gain all the knowledge I can. Karma has given me my environment, so I must do all in my small way to advance and pave the way for a better future."

As he finished the last sentence, he smiled and placed his hand upon my shoulder. Involuntarily I started and shrank from him.

He only leaned forward, and said, with a questioning look in his clear, blue eyes, "There is something almost womanly in your face."

The color rose to my cheeks and faded away as quickly as it had come, leaving a deathly pallor in place of my usual glow of health. I gasped for breath, my breast heaved, the trees swam before my eyes!

He grasped my hands and held them, whispering in my ear, "I believe you are a woman!"

I heard no more, for I fell prostrate upon the ground in a faint!

When my consciousness returned, the stranger was slowly retreating. My eyes followed his vanishing form; hardly knowing what I did, I stretched forth my hands as if by gesture to call him back. I would have given worlds to have seen him turn—to have heard once again his soft, musical voice.

He left me wondering, silent, saddened yet uplifted. His presence had shed its wholesome influence into my life as the sun sheds its beams upon a plant that has grown in the shade, strengthening it and giving it vitality.

The stranger had evidently acquainted Vance with his discovery, for my kind brother never alluded to the incidents of that morning.

Vance sat on a log by my side, supporting me with his arm.

"Do you feel well enough to start?" he asked, satisfied with the return of color to my face.

"Oh, yes!" I replied, springing up

and mounting my mule cheerfully. "Come along, Vance, let's out of here."

How I galloped from the spot! How poor Ajax was trotted up hill and down! How cruelly I used the spurs! I dashed over the ground like a wild animal. I turned corners and dodged between trees at a reckless speed.

My panting Ajax was almost exhausted when finally I "pulled up" upon an open stretch of country, dismounted, loosened the cinch, and sat down to await my brother's coming, for I was several miles in advance of him.

Well, five weeks of travel had passed by. We had killed several deer, considerable game, had experienced encounters with Indians, but had met few travellers.

We were now travelling a most wild and desolate region. Nothing but huge boulders and ragged cliffs loomed up around us.

In passing over mountains that were dangerous of travel, Vance always followed me closely for fear of accident. He evinced a most manly protection of me at all times, and shielded me from harm with almost motherly care.

We chanced upon a narrow pathway that led in among the rocks, with a tall bank on one side and an almost perpendicular precipice on the other. The mules' hoofs slipped and slid on the shining, broken granite, and it was with difficulty that we made any progress at all.

Suddenly a shuffling and a scream caused me to turn in my saddle. To my horror, I saw Vance dash over the precipice, thousands of feet below into the crevice of a glacier! I uttered a cry, I called his name, but the winds only took up my mournful tone and echoed it from mountain to mountain. I heard the dull sound of his body as it struck upon a rock, and my head reeled! I was dazed! I was stupefied!

The trail was so narrow that I could neither turn my mule nor dismount. My first impulse was to follow Vance, to terminate my ill-favored life, for I now was destitute and alone, robbed of the only friend in whom I had sympathy and trust; but upon second thought I concluded first to care for my poor brother's remains. I took my map and compass from my pocket, located the spot (we had kept an accurate schedule of our travels), and sorrowfully started forward.

For three days I wandered about, taking little food and sleep that I might lose no time in reaching the spot where Vance's body lay.

I finally arrived at the base of the precipice, where I found the disfigured body. The face was torn and mutilated almost beyond recognition; one arm was entirely severed from the body, while the other limbs were horribly crushed and mangled.

I fell upon the snow! I writhed and grovelled in it! I wept and moaned piteously, but in nothing could I find consolation.

After sobbing myself into a sort of stupor, I rose, used a small trowel and my hands to dig a grave near by, and dragged the body from where it had fallen to the grave I had prepared. Before covering it with earth and snow, I took from the pockets all the papers and money I could find, and thrust them carelessly into my own pockets. I then made the burial mound, placed some wild-flowers upon the grave, and started for home.

Home! Where on earth is home for me? Without Vance there is no home, for my heart can find no solace in the family of sisters, mother, and father to which I unfortunately belong.

Yet is it love that prompted the display of emotion at my brother's grave and the lonely feeling I now experience? I think it is not. My utter dependence upon him for support in what by the gauge of the conventional woman would be called "wild schemes" and "unwomanly

conduct," left me grieving for him as I should grieve for the loss of anything that served me or was necessary to my contentment. How different my grief for the loss of the stranger! With what tenderness do I remember his every word and expression!

Three years have elapsed since the tragic death of my brother. When compelled to return to the city and adopt woman's attire, what more fitting field of work should I choose than that suggested by the stranger! I have given my undivided attention to the study of occultism in some of its various branches, with the ultimate aim of spending several years n India. I am constantly discovering "unhappy souls" like myself *seemingly* misplaced, for, like the tree after which I was named, my very nature seems twisted and writhed from its proper symmetry—and it is my strongest hope to try to alleviate their suffering. But I have discovered that there are no mistakes; for, as the stranger in the mountains said, we reap only what we sow, we are now paying for our past misdeeds and producing new causes.

I never saw the stranger again! Among the papers Vance left I found a little slip upon which was written the stranger's name and address. I read of his death a few months ago. He left a wife to whom he had been married six years. This solves a problem!

MUSIC ON THE MARKET.

BY J. L. STEFFENS.

THE broker had been trying to persuade the banker to make him a loan, but without success.

"I am sorry," the banker said. "I know your position and I have no doubt it would all turn out as you say. But I don't see how I can let you have even the temporary aid you need to carry you over the worst. I too think the change is coming soon, but the drag of our own customers is heavy, and it is all we can do to meet their claims upon us."

"But," urged the broker, "if I am not a regular customer, I am your friend, and what is, perhaps, of more present importance, I am a link in a chain of related interests, all of which will suffer if I don't hold out."

"True enough," came the firm reply. "In such times as these, however, we are——"

Music interrupted them. From the street below a peculiarly sweet and strange melody arose. Often organ-grinders pass through Wall Street, causing little more than a frown to business. But this was the round, pure voice of a woman, borne upward on the sustaining voices of men, and as it echoed through the deep side street it caused vibrations in some hearts. It was a foreign laughing song, the expression of a momentary joy in a life of sadness, and the singers beneath the banker's window sang the laughter with never a smile. There was no need of seeing the upturned faces, to feel the melancholy of their hearts. And the banker felt it.

The broker walked to the window, and looking down into the street said impatiently:

"Italian song peddlers; an old hag woman and two black beggars."

"Singing Napoli, Napoli," added the banker as to himself.

It recalled to him the scenes and the feelings of Southern Italy and his family, who were there at that moment. He had heard that song there so often that he had sometimes cursed it. But now it soothed him, gave him a moment of the sweet, sad indolence which had rested him in

his months of leisure in poor beautiful Naples. He listened, remembered, rested; and a few old thoughts, old foolish ideals passed through his mind.

He pinched his cigar till it went out.

After all, he thought, what does it matter, this constant toil and care? There is beauty in life and purposes ultimate and fine. I forget that the uses of all my labor are other than the labor itself. I am winning for my wife and our happy children. And so this broker, too, is pleading for his invalid wife, my daughter's friend, and his one poor sickly boy; all without knowing it.

"How's your wife now?" he asked the banker suddenly, but gently.

"My wife? My wife? Oh, she is very ill again. I shall send—I intended to send her away to Southern Italy in the fall; for her lungs, you know."

The music ceased. A window here and there went up and a few pennies jingled on the pavement. The banker threw out a coin, then walked thoughtfully to the "ticker." He slipped the "tape" between his finger and thumb for a few minutes, and saw that the market was weak and feverish.

The broker too had been listening to the song. But he cast aside the feelings the music had left upon him and, turning to the banker, said:

"You were just about to say——"

"Yes," resumed the other, "I was saying that at this particular time, when all values are fluctuating so wildly, we are compelled to be unusually conservative. I am sorry, very sorry, but I don't see how I can accommodate you at present."

So the music came, was heard, was felt; then it passed, and was gone from the market, leaving no remembrance after it.

YUMA, ARIZONA.

BY R. A. L. ROBINSON.

YUMA COUNTY was one of the four political divisions established by act of Congress creating the Territory, in 1863, and the city of Yuma lies in the southwestern portion on the Colorado River, the boundary between Arizona and California. In the matter of water, an essential question in the southwest, it is better supplied than any other county in the Territory. The Gila River crosses it from the east to the southwest, a distance of about one hundred and ten miles, furnishing drainage during the rainy season and water for irrigation during a large part of the year, and finally forms a confluence with the Great Colorado at the city of Yuma. Since the days of 1849 the Gila River has been an important factor in a commercial sense and as furnishing a supply for irrigating purposes.

By means of dams and storage reservoirs, now under construction on this river, a portion of its spring flood waters will be stored and made available for summer use, as is done in India where the reservoirs are constructed by the English government. The soil of the valley of the Gila is second only in quality to that of the Colorado.

The Colorado runs from north to south, forming the western boundary of the county and carrying a volume of water larger than that of the Columbia, with excellent economic possibilities for irrigation.

The topographical configuration of the county includes a series of wide plateaus gradually rising from the

YUMA FROM THE RIVER.

Gulf of California about fifty miles south. These plateaus are crossed by numerous ranges of mountains, especially in the northern part, between which lie large, fertile valleys. The mountain ranges are for the most part abrupt and rugged, but highly mineralized, yielding gold, silver, lead, iron, and copper in paying quantities. The Harqua Hala Mountains in the northeastern part of Yuma County contain the "Bonanza," one of the best-paying gold mines in the United States. The ore is what miners term "free." It is milled at the mine, and during the last year the shipment of gold bullion averaged about $50,000 per month.

These mountains are most valuable for their production of mineral. In the gulches considerable placer gold is taken out, and though such mining has been going on since the occupation by the mission fathers, the supply in the rocky, gravelly canyons does not seem to have diminished. The metal is bright yellow and very rich, bringing eighteen to nineteen dollars per ounce.

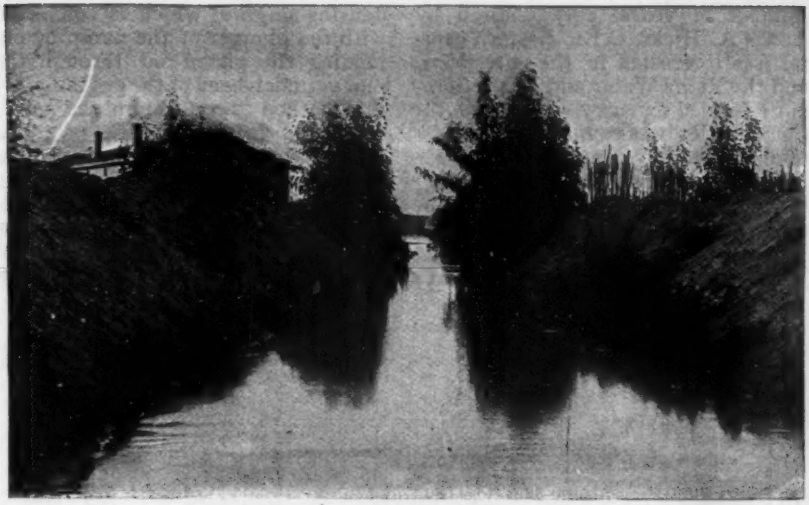
It was once thought that all that portion of the county lying north of the Gila was worthless because of the absence of perpetual streams from which to draw a water-supply, though the country consists of beautiful valleys and plateaus that are very productive when irrigated. In the last few years wonderful strides have been made by engineers and irrigationists toward the reclamation of this vast area.

A gigantic scheme is at present on foot, by which it is proposed to bring the water through the very heart of the country, by means of a large canal, to be brought out one hundred miles above Yuma near the juncture of Bill Williams Fork with the Colorado. Many engineers of note think it feasible, and when it is done it will redeem a larger acreage of fruit and grain lands than is contained in the entire Salt River Valley of central Arizona. The topography of Yuma County is comparatively unknown through the channels of government report, and scarcely one-tenth of it has been surveyed other than by private enterprise. Individuals acquainted with its resources and wonderful possibilities have pushed investigation, and now statistics concerning it have been collected and widely circulated.

A large portion of the county, which was part of the Gadsden purchase, lies south of the Gila. This includes the vast valley on the east side of the Colorado and extending from Yuma to the Mexican line, a distance of twenty-five miles. It was one of the finest large bodies of land in the United States, adapted to the raising of all kinds of grain, fruit, and vegetables. This valley and the vast plateaus in the north give to Yuma County the largest extent of arable lands in the Territory, and a water famine is impossible. There is no section of the Territory so well supplied. Low water in the Colorado has an average depth of five and a width of six hundred feet, while at its highest it averages fifteen feet, with a width of one-half to three-fourths of a mile.

During January and February the rainy seasons occur, though it is a period more in name than fact, and the average fall for the last eighteen years has only been two and one-half inches. Everything depends upon irrigation, and people are not disappointed when there occurs a year with three hundred and sixty-five cloudless days.

During the dry, hot months, when water is most needed, it will be seen that the Colorado is running full, feeding the forests of cottonwoods and willows along its course, watering the Indian's corn and melons, and furnishing such a supply for the canals and ditches that no matter how much it may be drawn upon no visible diminution can be apparent. The great rise of the Gila occurs



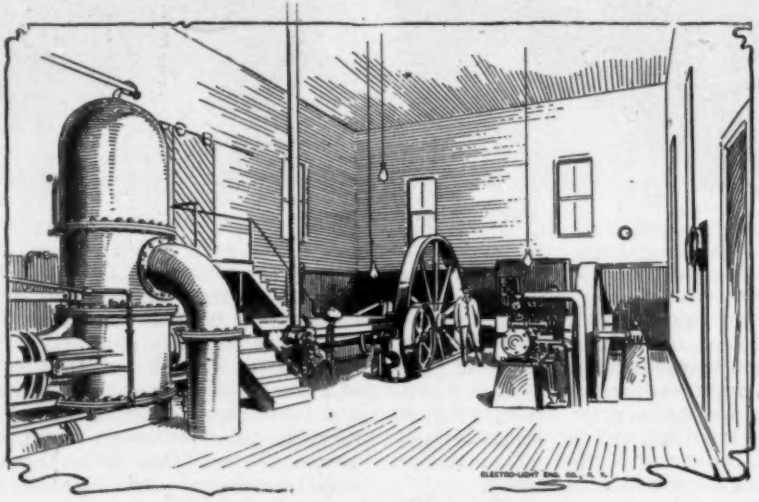
CANAL SCENE—COLORADO RIVER IRRIGATION COMPANY.

during the months of January and February. The latter stream, rising in the mountains of New Mexico, catches the winter rainfall, which often reaches thirty inches, and pours an immense amount of water into the Colorado, after meandering for one hundred and ten miles through the county of Yuma. At that time the Colorado is at its lowest.

The Colorado, however, is the Nile of North America, and in many ways the two streams resemble each other. Rising amid the snow-capped peaks, the one in the centre of Africa and the other in the heart of the Rockies, they course away in the light of the sun like molten silver fringed with the green of forests, until, after winding around the ruins of extinct peoples, the one by Memphis and Karnac, the other those of the cliffs and the more ancient ones of the valley, they are lost in the wastes of the sea. Each is fed by the melting snows; they rise about the same time of the year, pass through countries similar in topographical and climatic conditions, and deposit a silt and detritus which government chemists pronounce the same. This detritus, when deposited over the valley of the Colorado in both Arizona and California, is larger than that of the lower Nile through the distribution of water used for irrigating purposes, and does away forever with the necessity of fertilizers. Upon irrigation depends the future agricultural success of Arizona. This is especially true of the central and southern portions. Several years ago it was found that tapping the Colorado with canals would entail an enormous expense—more than the people at that time were able to put into such enterprises, consequently they began to cast about for a cheaper method by which to get the water on the land.

It has long been the dream of the residents of Yuma to see the fertile Colorado River water made available for irrigating purposes on the beautiful, level mesa land which adjoins the town on the south, and this dream has at last been realized through the energy of Hiram W. Blaisdell, C.E., who has been identified with the development of Yuma County for a

number of years, ably assisted by Lewis A. Hicks, C.E. Eastern capital was interested in the enterprise, and the Yuma Water and Light Company formed to carry out the work. Construction was commenced in September last and completed in February, since which time the pumping plant has been in constant operation, sending an immense stream of fertile Colorado water to the thirsty mesa. What a surprise it must have been to those arid lands to be given such a bountiful supply of the life-giving fluid! The resultant growth has proven their gratitude for the gracious draught.



YUMA WATER AND LIGHT COMPANY'S PUMPING PLANT.

The pumping plant is situated immediately in the town on the bank of the Colorado River. The exceptional elevation of eighty feet to which the water had to be raised for irrigating the heights prevented the use of the ordinary centrifugal irrigating pump, and compelled the designing and construction of a special form in which durability and economy of operation must be combined. The pumping plant adopted consists of a 175 H. P. high-duty, automatic cut-off condensing engine, which is connected with the plunger of the pump by extending the piston-rod through the rear cylinder-head of the engine. By this method of connection, the power generated by the engine is transmitted to the pump without the intervention of cranks.

Another monster irrigation scheme, of which Arizona at large and Yuma in particular has just cause to be proud, is that of the Colorado River Irrigation Company. This plant is also situated in the town of Yuma, runs both day and night, and has a capacity of 6,000 gallons per minute, while arrangements are being made to increase it to 30,000, which will make it the largest irrigation pumping plant in the world. The land upon which the water is carried lies below the town, extending from the Gila to the Mexican line, a distance of about twenty-two miles by an average of six in width, containing 60,000 acres, 40,000 of which are subject to irrigation without any considerable outlay of expense.

Some time ago Coe Brothers, capitalists of Denver, became interested

JUDGE J. L. WANDERWERKER.

in this portion of the Colorado Valley, and Captain Ingalls and Mr. J. H. Carpenter formed a stock company with the object of developing that immense section. The present pumping plant was put in, water distributed over the nearer portions, and four hundred acres planted with oranges, lemons, figs, grapes, apricots, and various kinds of vegetables. Great success attended the experiment, and with the increase of the pumping capacity thousands of acres more will be brought under cultivation. A limited amount of water is needed for irrigation, and where the ground is once saturated fourteen inches to the acre will be sufficient to grow all kinds of fruits and vegetables. No finer land for the growing of grain, melons, vegetables, and all deciduous fruits exists anywhere than this portion of the Colorado Valley. The soil is a rich loam, made by the sediment of the river. Immense groves of mesquite grow on the uncleared portions, furnishing an almost inexhaustible supply of firewood, which is only needed, however, for cooking purposes and during the mornings and evenings of winter.

Actual trial has proven this section superior to any other in the world for raisins. Two-year-old vines yield about three tons, while those seven years old average about seven. A close estimate on the selling price is $20 per ton, which gives an idea of the early and large return. Raisins grow as luxuriantly, ripen more quickly, and cure with less trouble than in any country in the world. The climate seems perfectly adapted to them, and all things concurring as they do, it seems that in a little while this section of Arizona will be able to produce the supply for the United States now shipped from the shores of the Mediterranean.

Unlike Southern California, there is no fog in this section. By the time the Gulf winds have passed over the desert lying south of the line they have been robbed of all the moisture they contained, and instead of causing decay they are conducive to the

preservation of all kinds of fruit, which accounts in a great degree for the fitness of the country for raisin culture.

Another fruit for which the Colorado Valley is especially fitted is the fig. The trees are of rapid growth, begin bearing in two years, and produce bountifully. Trees average a production of one hundred and fifty pounds per year, and the Colorado River Irrigation Company has been selling them from its orchard since the 10th of May, weeks ahead of any other locality. Considering the fact that three crops per year are practical nature grow and thrive well. The Persian date fruits heavily and at an early age, and there is always a good market for its production. The lands of the Yuma Fruit Company are the natural home of the olive, and the great success that has attended its culture in California is proof of what may be done with it here. The time is not far distant when between the Gila and the Gulf every portion of the valley belonging to this company will be settled and cultivated in these early fruits, for which the demand is always greater than the supply.

Another enterprise which, while it

VINEYARD—COLORADO RIVER IRRIGATION COMPANY.

duced, in time the production at Yuma of this fruit alone promises to be enormous.

Apricots, peaches, and pears are the leading deciduous fruits. They are hardy, vigorous growers, bearing at two years as much as the trees can support, and requiring attention to keep them from breaking. In sweetness, size, flavor, and color the fruit is unsurpassed, and ripening as they do weeks ahead of California fruit, they find a sure market and the highest price. All fruits of a semi-tropi-

is in California, owes its success to Yuma, is the Colorado Irrigation Canal, and deserves mention as one of the great undertakings to redeem the desert. This line has only been surveyed during this year, but as much as $60,000 has been spent in that work, and the location has been permanently settled. The canal will be taken out at the *Pot Holes*, the old mission mines, and will run southwest to Flowing Wells, a distance of about eighty miles, redeeming some of the finest lands in South-

ern California. Work has been laid off for the summer, but in October it will begin again and will be pushed to completion.

Judge E. M. Sanford, who owns land south of Yuma on the Arizona side of the river, is president of the Cocopah Fruit Company, with headquarters in the city. Five hundred acres are being planted with early fruits of all kinds, with the object of supplying the Eastern markets. The earliness of ripening insures its success beyond doubt.

The pumping plants just described are the only ones now in active operation on the river in the interest of irrigation, though canals are being surveyed from both sides at points above, and on the Gila several reservoir and storage systems are being put in. When completed, they will redeem thousands of acres of very valuable land and will open up an agricultural section of great benefit to the town of Yuma. The Mohawk, the South Gila, and the Farmer's Canal are among the prominent ones, all of which are now furnishing water for certain distances.

Several new propositions are being talked of, one of which is to dam the Gila a few miles above Yuma, but it is yet in embryo and its construction not certain. With sufficient capital reservoirs can be built along the Gila, so that every foot of its valley area may be cultivated, and at the same time sufficient water be held in reserve to work the placer mines, now handled by a system of "dry washing," by which they yield considerable. In the matter of climate, Yuma in many respects excels any other portion of the United States. Situated in the same latitude as Charleston, S. C., and San Diego, Cal., any one acquainted with the climate of these localities may form some idea of the relative degrees of heat and cold. In some respects, as is proven by the United States weather statistics, there is a slight difference in favor of Yuma. The Yuma weather bureau is careful and conscientious, and observations have been made regularly for the last fourteen years. The record shows a combination of the highest barometer with the height of temperature to be found anywhere in the world. This is an invaluable attribute of climate, especially for those who are afflicted with any pulmonary trouble, as it is comparatively no exertion for the lungs to breathe the dry atmosphere. At Yuma the air has the barometric pressure of the best health resorts, without the attendant dampness found at the sea-shore. For eighteen years, in winter the average temperature has been 59 degrees, which is not excessive. The highest shade temperature ever recorded was 118

HON. S. S. GILLESPIE.

degrees. This may appear high to one unacquainted with the climate, but it is modified by the low relative humidity, so that 118 degrees at Yuma is not so oppressive as 85 degrees in San Francisco and at the coast health resorts or the cities of the East. It is to the humidity of the atmosphere that oppressive heat is due. At San Diego the maximum humidity is about 84, and it seldom falls below it; at the resorts of southern Florida it is about the same, while at Yuma the highest maximum ever recorded was only 44, and this was during the early morning, when the thermometer registered very low. During the hot hours of the day the humidity is only about 7, which accounts for the fact that no matter how high the thermometer, even 118 degrees, the heat is not intolerable. Yuma has less rainfall than any other point on the habitable globe, the total annual fall being only one-third as great as the precipitations that have fallen in a single day at places known as health resorts. Snow is unknown, there are no foggy days, few clouds, and a totally cloudy day is a thing of rare occurrence.

In the afternoon and throughout the evenings a breeze blows constantly from the Gulf, taking away the heat, absorbed by the earth, and leaving the inhabitants to begin the new day entirely refreshed and ready for its labor. There are no extremes of heat or cold, such as are feared by invalids. The low humidity obviates the heat and the mountains to the north break off the cold, while the Gulf breeze assists in moderating, and gives Yuma the appearance of a country more than half tropical.

The local government of Yuma County is administered about the same as similar governments in the Eastern States. The county officers are the probate judge, who is *ex-officio* county school superintendent; the sheriff, tax assessor and collector, treasurer, recorder, county attorney and surveyor.

The city of Yuma has a municipal government, and its affairs are conducted in a very progressive manner. The mayor and board of aldermen are Hon. A. Frank, S. S. Gillespie, Charles Baker, F. Fredley, and W. T. Gondor. The city attorney is Judge J. L. Vanderwerker. In politics the county is divided, as is the city, both Republicans and Democrats electing members of their respective parties.

The council has inaugurated a system of government conducive to the welfare of the city, and by which progress and enterprise are insured. The land on which the city stands was granted to it by the Government, and at the beginning of the present municipal administration the corporation owned 1,100 lots, some of which have been sold and the money devoted to improvements. There are several thousand dollars in the city treasury, and the amount is continually increasing, so that in a short time there will be enough to grade streets and driveways, placing Yuma far ahead of any other town in Arizona in the matter of public improvements.

The city attorney, Judge J. L. Vanderwerker, who has been of valuable assistance in all the progressive measures of the city, is one of her best citizens and a lawyer known throughout the Territory. Judge Vanderwerker was born in New York, August 18th, 1852, received his literary education at Albany, and took the degree of B. L. in the University of Michigan in 1876, since which time he has been actively engaged in the practice of his profession. Some time ago he located in Yuma and at once took his place in the front rank of Arizona attorneys. He was twice appointed city attorney, which office he now holds, is attorney for the Southern Pacific Railway Company, the Colorado River Irrigation Company of California, the Farmer's Canal of Arizona, and other wealthy corporations. In addition he is vice-president of the Building and Loan Association and secretary of the

Commercial Club, which in Yuma corresponds to a board of trade.

The city of Yuma is the county-seat and has a population of about 2,000. It is situated south of the Gila at its junction with the Colorado, therefore in the territory covered by the Gadsden purchase, and dates its origin among the early mission settlements.

In 1700 Father Kino established a mission on the California side of the river where the post of Fort Yuma now stands. It was soon destroyed by the natives, but was rebuilt by Father Garces, who also founded another nine miles above on the same bank. In 1781 they were both destroyed and the Spanish settlement of 170 people massacred. It was not till Gen. Phil Kearny passed down the Gila with his command in 1847 that Americans began to know anything about this locality. In 1852 Fort Yuma was occupied by Heintzelman and Stoneman with six military companies, and after the Gadsden purchase the post was maintained for some time, but with the subjugation of the Indians it was abandoned and the buildings turned over to the Sisters of St. Joseph, who are now conducting a government Indian school. But the atmosphere of the army and its memories and records will ever cling about Yuma. The buildings of the quartermaster's department stand on the Arizona side and are now unoccupied. Large, dark, and dreary, with bats at dusk whisking hither and thither in swarms, they present an appearance of loneliness that moves one to thoughts of "banquet halls deserted," and he can almost hear the tread of martial feet in the vaulted halls and corridors.

The city rudely dashes aside the visionary's dream, for it presents an entirely opposite appearance. Activity and bustle are noticeable on every hand. New and handsome stone and brick business houses are being erected in place of the Mexican adobes, which are rapidly being torn down. The noise of the railroad, the activity on the street and at the river brink, the loading and sailing of steamers with cargoes of supplies for the towns and mining camps as far north as Utah, present a scene that would startle the stranger, who is most likely imbued with the one idea that Arizona is a waste of sandy desert, inhabited only by lethargic half-breed Indians and Mexicans.

YUMA.

At one time Yuma was the distributing-point for the army in Arizona, and in fact for everybody, the supplies being brought around Cape San Lucas and up the river by steamers. But with the completion of the Southern Pacific Railway, which passes through the city, the steamer line

was discontinued between that point and the Gulf, though the *Mojave*, *Gila*, *Aztec*, and *Electric* constantly ply up the river as far as Eldora Canyon in Utah, carrying supplies and bringing out ores. Yuma's river commerce is no small matter, and when little towns will have sprung up all along the Colorado it will be one of her greatest trade resources.

Many of Yuma's citizens are of Spanish and Mexican descent, both the English and Spanish languages being spoken by almost every one. The style of the buildings, around which are gardens luxuriant with oranges, lemons, and pomegranates, and the liquid accents of the southern language, suggest to a romantic fancy cities of the South far removed from American activity; but here American activity and the languor of the tropics are combined and united.

Everybody seems to have the interest of Yuma at heart, and it is manifested in a general spirit of public improvement. Educational facilities are becoming more extensive, and the city has recently completed a public-school building which is a great credit. The public schools of the town and county are conducted much as they are in the States, and the system is on a good substantial financial basis. There are also private schools possessing all the advantages of those of other localities, open to all who do not wish to patronize the free institutions. In the matter of churches, the Catholic and also various branches of the Protestant faiths are represented. They all have very good buildings, and services are held regularly and are well attended.

The only first-class hotel in the city stands on the bank of the river, and is kept by S. S. Gillespie. The building is large and commodious, and surrounded by verandas, a style of architecture especially suited to southern countries. On the upper gallery one can always get a cool breeze, though it may be hot below.

The Southern Pacific Railway Company is at present making surveys and preparing to erect a hotel worth $60,000 on a hill overlooking the city, river, and valley. Dr. C. L. Gregory, a physician from Yreka, Cal., has recently purchased a piece of land on Yuma Heights, and will erect a sanitarium, the most extensive thing of the kind in Arizona. Work will begin on this structure at an early date, and it is expected to be complete by midwinter. This will give Yuma all the advantages necessary for a health and winter resort, and will soon bring into prominence the many attractions that it possesses.

Excursions up the Colorado River from Yuma are sometimes arranged with any of the steamers. The scenery is both weird and beautiful. First, the forests of willows stretching back over the valley, fresh and green as an oasis, watered by the rushing river, then rising cone upon cone the Castle Dome Mountains, the Picachos and the Harqua Halas, great rugged mountains of lava, basalt, and trap spewed out in ages past by mighty volcanos. Blended here are the great antitheses of nature, the strong, mighty, and rugged with the gentle, peaceful, and beautiful. The alternating charms of the day playing over the rich and variegated landscape are succeeded by such moonlight nights as have made the Alhambra of Spain the synonym for all there is poetical and picturesque in the whole of Latin Europe. The hardships that were undergone for the possession of the country are amply repaid by the beauty of the land bathed in the day's radiant sunshine, and the night's soft, insinuating moon that seems to re-create all the old passionate romances of Spain and Sicily, and add a fresh and potent charm to the old-world guitar under rose-covered porches, while in the northwest the Purple Hills and the Castle Dome range of mountains appear in bold relief, a scene of grandeur upon which numbers of tourists have seen fit to bestow their praise.

QUESTIONS OF THE DAY.

THE PRESIDENT'S MESSAGE.

THIS document is brief, clear, and apparently non-partisan. This is all that can be said in its favor. Regarding the money power and the people as arrayed against each other the message is partisan, being strongly in the interest of the former. The President seems to have discovered that there are financial distress and business depression in the country, and it is to be regretted that he does not comprehend the causes as clearly as he sees the condition. Business depression has not been caused by a restricted production of food articles or of raw materials for manufacturing, for the country has surpluses of them, nor has the condition arisen from a falling off of the number of consumers. The cause of the present uncomfortable condition is chiefly an insufficient volume of the circulating medium.

This is proved in many ways. The banks of the country have in numerous instances succumbed to the demands of depositors, because, whatever may have been their assets and securities, the currency was not to be had because it did not exist. The clearing house of New York has been driven to the issuance of certificates to the amount of many million dollars to supply circulation, a thing done to some extent in Boston. Manufacturers have had to resort to the issuance of checks to pay their laborers. Though there were millions of bushels of wheat in store in Chicago and a good export demand for it, still it could not be moved for the want of money; the banks of that great commercial metropolis could not supply it. A similar state of facts prevails all over the country.

The President ascribes the so-called Sherman law as the cause of this condition, a law which requires the purchase of 54,000,000 ounces of silver annually and the issuance thereon of certificates which shall pass as a legal tender for all public and private dues, and to that extent it did expand the circulating medium and supply the wants of business. The only evil that flowed from the Sherman law was through an erroneous interpretation under which the Secretary of the Treasury has redeemed the certificates in gold coin instead of silver coin, which had the effect to increase the gold stringency, alarm the gold-holders, and shake the confidence of the country. Added to this the administration stands pledged to a radical change of the tariff, which prevented the investment of new capital in manufacturing, caused the withdrawal of old capital, and all manufacturers to curtail production that they may not be caught with large stocks on hand when the change is made. The result has been that we have not produced sufficiently to supply home demand, and consequently have been compelled to purchase of foreign nations much that otherwise we would have produced. And this is the reason why we have in the last fiscal year imported $194,000,000 more than ever before, and why a balance of trade in our favor of $102,000,000 the previous year has been changed to an adverse balance of from fifty to a hundred million dollars to be paid in gold. Thus the gold stringency has been further increased and the volume of circulating medium to that extent reduced.

The President suggests no remedy for the ills from which the country is suffering ex-

cept a repeal of the purchasing clause of the Sherman law. Should Congress carry out this suggestion we will be left without any law for expanding the circulating medium except that for free coinage of gold, which will not give the country an increase of more than $25,000,000 per annum, and which under the tariff policy of the administration will cause it to flow out of the country to pay balances of trade in a fourfold amount. This policy will also further check manufacturing, lessen the price of raw materials, and throw a greater number of laborers out of employment. The President would subject the country to the pinching gold standard, when he should know that it is impossible to supply the wants of business with a circulation wholly redeemable in gold. It is incomprehensible that a man of observation and thought can suppose that business can flourish on such a basis and that the country can prosper when its money resources are constantly reduced through a policy that destroys domestic industries and compels us to rely on foreign nations for supplies of what we can practically produce.

The issue is between the producing and capital classes, and may lead to a serious conflict, for the country will hardly submit to a policy that enhances the power of money and crushes every other interest.

L. A. S.

SOME DANGEROUS PRECEDENTS.

IT is probably not true that Mr. Cleveland refuses to execute the Chinese exclusion laws, but it is apparent that he has no heart in the work and that the administration does not lend a helping hand and does discourage their execution. The laws are made by the representatives of the people, and the Executive is without discretion, his duty being to carry them out in letter and spirit. It is not his business to inquire into their wisdom or propriety. It was President Grant's theory that to execute a bad law would disclose its character more plainly and sooner lead to its modification or repeal. Mr. Cleveland seems to think that as the head of the nation he has large discretionary powers and is not strictly bound by the Constitution and laws. Andrew Jackson said that he executed the laws as he understood them, but Mr. Cleveland does not claim that he understands the Chinese exclusion acts differently from others or that there is doubt as to their meaning. He is simply opposed to them and means to modify them as far as he can without positive refusal to render obedience to them. Such an attitude is fraught with danger as a precedent, and if it is followed without punishment or rebuke the autocratic principle will be established in the Government.

Political parties have been in the habit of making declaration of their principles in platforms and pledging themselves to their execution if voted into power. The people have relied on such declarations and have expected that parties would keep their faith. There could be no intelligent voting if a promulgation of principles were not made. As is customary the Democratic party, in national convention at Chicago in 1892, declared itself in favor of bimetallism in a manner that led the country to believe that coinage of gold and silver would be placed on the same basis and on the ratio always established in our coinage laws. Mr. Cleveland was nominated on the platform, and in accepting the nomination impliedly indorsed it and pledged himself to faithfully carry it out. His first act in connection with legislation was to strike down silver coinage and place the country on the narrow basis of the gold measure. The great object to be attained in silver coinage is an enlargement of the money volume, which the country so much needs. If the precedent is established that a platform is not to be strictly observed, we shall be all at sea with reference to the policies that shall be pursued by the Government. It will be a sad day for the republic when it becomes understood that platforms or declarations of principles have no meaning. It is only when conditions have materially changed between the time when the declaration was made and the time for action that can justify any departure from the policy promulgated. It cannot be claimed that such change has taken place, except that the needs of the country for enlargement of the volume of the circulating medium have become more pressing since the Democratic convention adjourned and since the election which resulted in Democratic success.

A President is required to give information to Congress touching the condition of the country, and may recommend such legislation as he deems advisable. This is the extent of his constitutional power, so far as influencing the action of Congress is concerned. Until Andrew Jackson became President, no attempt had been made by any President to bully or influence Congress through the use of patronage or otherwise, except within constitutional limitations. John Tyler, Millard Fillmore, and Andrew Johnson used their patronage freely to control Congress for personal purposes, and Pierce and Buchanan did the same thing to protect and strengthen slavery, but since Andrew Johnson no President has attempted to control legislation except as plainly authorized by the Constitution. It is charged, and there is much evidence to prove it, that President Cleveland has resorted to methods more reprehensible than any of his predecessors to secure particular legislation, methods bolder and more autocratic than those pursued by Andrew Jackson. In every instance these tactics have sooner or later been rebuked by the people. If Mr. Cleveland succeeds and is not unmistakably rebuked at the first opportunity, a most dangerous precedent will have been established, and general political demoralization will ensue. Nothing can be more essential to the perpetuity of free institutions than the preservation of the independence and virtue of the representatives of the people.

DOCTOR PASCAL.

"THE experienced novelist," says Zola, "should work upon the characters, passions, human and social facts as the physicist and chemist work with organic bodies, as the physiologist works with living organisms . . . showing by experiment how passion exhibits itself in social surroundings." On these principles he has produced the series of the "Rougons-Macquarts," which has just been completed by the publication of "Le Docteur Pascal."[1]

In this book Zola has summed up the results of his experiments in observing and depicting the natural and social history of a family whose various members ramify through all grades of French society. And these results as expressed by Doctor Pascal would seem to be a faith in man as a part of nature, a respect and a hope for him, despite his weakness and his baseness, as an organism among other organisms in the great, ceaseless, ever-advancing flux that still bears on the mass however oft and far the individual may fall behind. In this Zola shows how deeply he has been influenced by the scientific movement of his time. Evolution, heredity, with all their train of bold investigation and bolder hypotheses, which for the last half-century have been penetrating deeper and deeper into the secrets of life, have found in him an eager and fearless disciple, who has taken them up and applied them in a series of studies on men in their social relations, more searching and profound than any ever before made for purposes of fiction. Through science has Zola, the so-called realist, approached nature as expressed in man, and it is from the scientist's standpoint that he has construed him.

Now the science that particularly concerns itself with man is medicine, and medicine views man pathologically. And so has Zola viewed him. He has felt his pulse, sounded his heart and lungs, laid bare his stigmata, and the inevitable diagnosis has been disease. It is but natural, therefore, that the last of the "Rougons-Macquarts," this Doctor Pascal with his genealogical tree arranged on pathological principles and his quest after an elixir to heal the ills of the flesh, should be a physician. He is the necessary result of the principles upon which Zola has written. But he is a betrayal of the author and of the author's standpoint. Zola has let his science, in leading him to the study of life, determine his interpretation of its phenomena. And in so doing he is not a realist in the true sense of the word, or rather he is a realist with limitations.

But in judging thus an author, one should always take into account his surroundings, and nowhere in the world are the pathological details of life so apparent and the investigations and researches of science in regard to them so public and popular as in Paris.

The medical lectures and cliniques are free and open for any who will to enter. The writers on these subjects are many; their books are cheap and exposed conspicuously to catch all buyers' eyes. Abnormality and disease, the unfailing result of the excesses the hot-blooded French are so prone to, are in the very air, and all Frenchmen take a personal or general interest in them. To one who has lived in Paris, therefore, or who has followed the investigations

[1] "Le Docteur Pascal," par Emile Zola. Paris: Bibliothèque Charpentier. C. Charpentier et E. Fasquelles, editeurs, 1893. English translation by Mary J. Serrano. Cassell Publishing Company, New York.

Frenchmen are making in heredity and disease, Zola's work will be more comprehensible and defensible; and much in this last volume will not be new. His Doctor Pascal does but follow, in the importance he attaches to heredity, the distinguished alienist, the late Dr. Charcot; and the elixir of life with which he would rejuvenate himself and all mankind is but the result of a series of experiments made by Brown-Séquard. Indeed Zola, perhaps more than any other writer, is a part of his *milieu*, and he should not be judged without it or without taking it into account.

Though he has won by his genius an immense audience beyond his native land, he writes and has written, first, last, and always, for his own people. He is a Frenchman writing for Frenchmen, with the purpose of showing them, in the only way they perhaps can be brought to see, the dangers, the ruin to which their excesses expose them. That his books appeal as they do to a more universal audience is due to the art with which his genius enables him to interpret and the fidelity and fearlessness with which he reproduces so much of the truth as he sees.

As a story "Le Docteur Pascal" is, like its predecessors, powerful, unusual, and interesting, and though it is in a way a synopsis of them it is independent of them, even as the individual is differentiated by personal traits from the race to which he belongs. The characters are attractive; the scene they are set in unique and refined. Indeed, there is no more delightful figure in fiction than Doctor Pascal with his passion for scientific research and his naïve omission of himself from the terrible category of degeneration and disease he makes of his family, the "Rougons-Macquarts." Both he and Clotilde, the leading female figure, are highly ideal. Throughout the book, in fact, there is a remarkable blending of the ideal with the real, the mystical with the actual, and there is a delicacy and grace of treatment fine as the white hair the author's master-touch makes us see waving softly about the sexagenarian doctor's face. There is a strong suggestion of Faust in this character of the doctor. Like Faust he has given a whole life to the acquirement of knowledge and the pursuit of science, like Faust he would wrest from nature her last secret, and like Faust he too wakes in old age to the romance and passion of youth. Here as in all Zola's books the strongest of human passions plays its part and is unreservedly portrayed, but with an emphasis on the finer sentiments that ennoble and spiritualize it. And that other passion of the human heart, the mother-love, is exquisitely expressed. There is no sweeter or more gracious scene in all literature than Clotilde with her babe at her breast, at peace in her maternity.

THE PRINCE OF INDIA.

Like Zola, Lew Wallace makes elaborate studies for his novels, but the similarity ends there, and nothing could well be more different than the results they obtain. In the "Prince of India," [1] which he has been engaged on some years, the author of "Ben Hur" has produced an historical novel of the old school with all the usual characteristics—romance, adventure, mystery, and much description. There is perhaps a modern motive underlying the religious disquisitions with which the book is plentifully besprinkled, and certainly there is a modern application in the absurd religious dissensions depicted. The place and period chosen, that stormy and pathetic moment when the empire of the Greeks, reduced to one city, was tottering to its fall, was the culmination of the schismatic disputes that through centuries had rent the Christian Church, and Constantinople was a hot-bed of bigotry, prejudice, and violent faction. Not even Rome has ever offered so tremendous and so appalling a spectacle of the weakness and imbecility of men as did Constantinople in the middle of the fifteenth century. Then as now the most cosmopolitan city in the world, with people of almost every race making up her heterogeneous population, she was, nevertheless, governed by two narrow religious factions utterly opposed to and intolerant of each other. The court sided with one faction, the people with the other; and the quarrels of dogmatic disputants formed the sole business of life. The young men were all monks, and the women and old men were their partisans or opponents. There was no interest in anything outside the city walls, and little within them for anything but the prayers and riots in the churches. Meantime two peoples, the Jews and the Turks, believers also in the Christians' God, looked on in amazement at and profited by their divisions. The Jews exploited the trade and commerce of the town, and the Turks closed in their victorious lines around the last stronghold of the Cæsars.

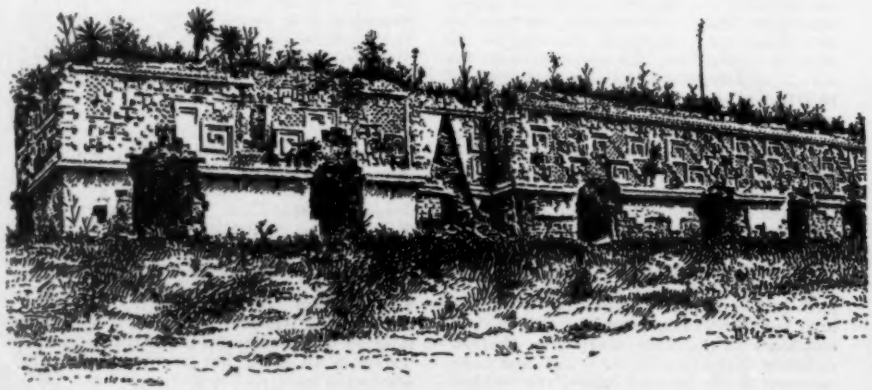
This picturesque and fateful situation has been immortalized by Gibbon, and from Gibbon General Wallace has evidently drawn his inspiration. That his presentation of it is to be compared with Gibbon's can hardly be said, but he gives an adequate idea of it, and for the sentimental the flavor of romance he has added will doubtless add to the attraction. Given that period and those conditions, it was of course unavoidable that religion should play the prominent part that it does in his book, but the discussions are somewhat long and might well have been abridged with benefit to the purposes of the story. In making the Wandering Jew the

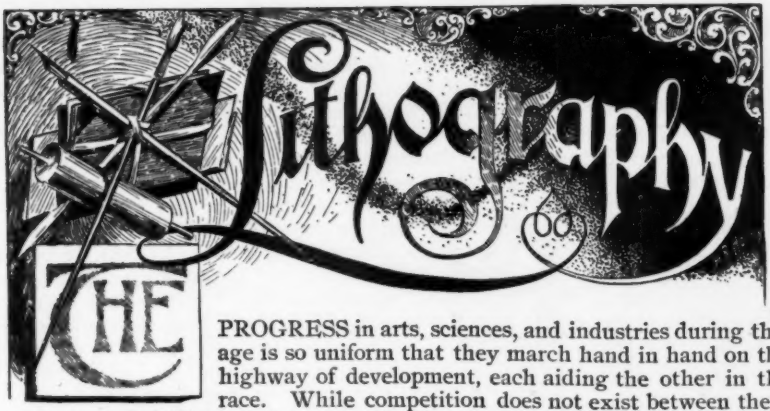
[1] "The Prince of India," by Lew Wallace. Harper & Bros., New York, 1893.

central figure of his book the author has shown a fine confidence in his undoubted ability to handle an old subject in a new way. The mysterious Jew with the curse of Christ upon him is a familiar figure to readers, having already been incorporated twice into the literature of this century. Neither Eugene Sue nor the author of "Salatheil," however, succeeded in making a reality out of this strange ghost of tradition, and it must be confessed that Wallace has not succeeded much better. The Prince of India is very much a *deus ex machina*, and he is not especially relevant to the story the author has wreathed about Constantinople's crumbling walls. There is, moreover, an almost banal reflection of the wonders of "Monte Cristo" in the untold wealth he is able to command and the mysterious sources whence he draws it. The description of his visit to the tomb of Hiram, King of Tyre, is not particularly imposing, and his exit at the end of the story is ignoble.

In the treatment of his material the author has shown the same art as in "Ben Hur." The narrative is generally lively, the descriptions good, and the grouping picturesque, but the book as a whole is not equal to its predecessor. Besides length and discursiveness it has serious defects of style. Indeed, it must be said that this author lacks entirely the literary gift called style, which makes whatever Henry James, for instance, writes delightful in itself. But no man, not even a writer, should be criticised for not showing talent that he does not possess. There are, however, certain lesser graces and refinements of style that are within the ability of all, and even these General Wallace neglects. His diction is inexcusably careless; throughout the book there are errors a schoolboy, as Macaulay would say, should not commit. The infinitive is divided whenever division is possible, and there are other inaccuracies and inelegancies too numerous to mention. It should be added, however, that these faults are common to most English and American writers of fiction. The severe literary standard and requirements that make a French novel, however poor otherwise, in this respect a work of art, are not as yet operative on writers in the English language. But the movement must begin with the writers themselves if ever at all, and consequently, however unnecessary it may appear, their attention should be called to the fact. To appreciate these strictures the reader has but to compare "The Prince of India" with "Le Docteur Pascal" *in the original*. Yet Emile Zola is not by any means what the French call a stylist.

Nevertheless, despite defects and redundancy, "The Prince of India" contains much for almost any reader to enjoy; and that it has already passed successfully its test of popularity is proved by the fact that the first edition is even now exhausted.

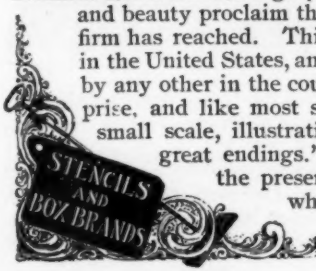




PROGRESS in arts, sciences, and industries during this age is so uniform that they march hand in hand on the highway of development, each aiding the other in the race. While competition does not exist between these three factors of civilization, it is an intrinsic necessity for the successful expansion of each individual one of them, and improvements, invention and new discoveries are the requisites for advancement in arts, manufactures and other industries. When the art of printing was originated, crude as it was with its accessories of wooden type and primitive hand-press, the inventor, slow as was his process of production, was regarded as a necromancer, and to save his body from the flames, was compelled to explain the manner of his producing so many Bibles just alike. Since that time no other art or industry has made more rapid progress.

Lithography, or the art of printing from stone, was invented by Aloys Senefelder, of Munich, about the end of the eighteenth century. Were he alive to-day and could see the extent to which improvement has carried his simple invention, his surprise would be beyond all bounds. The stones used in this branch of printing are obtained from calcareo-argillaceous deposits, or beds constructed of layers varying from the thickness of writing paper to that of several inches. They are of several hues, yellowish-white, reddish, pearl-gray, blue and green, and are of different degrees of hardness, which supply suitable material for the lithographer to use pen or brush, chalk or the engraving tool according to the demands made upon him for writings, printings, or drawings. In the case of colored pictures—known as chromo-lithographs—and colored maps, a separate stone is required for each color, one stone being printed after the other, and so arranged that the colors blend together and produce the desired effect. The best lithographic stones are found near Pappenheim, on the Danube, in Bavaria. Others of inferior quality have been discovered in Silesia, England, France and other countries; no good ones have as yet been found in the United States.

The cover of this number of the CALIFORNIAN has been produced by the Schmidt Label and Lithographic Company, of San Francisco, and its excellence and beauty proclaim the perfection in the lithographic art which that firm has reached. This establishment is one of the largest of its kind in the United States, and as to its practical arrangements, is unequalled by any other in the country. It is the outgrowth of energy and enterprise, and like most successful undertakings it was started on a very small scale, illustrating the old adage that "little beginnings have great endings." The founder of this great establishment was the present president of the company, Mr. Max Schmidt, who with the modest capital of $40.75 commenced operations in 1872 on Clay street, paying a rental of ten dollars a month for his work-



shop. At first he performed all the work himself; then, after a time, his means admitted of his hiring a boy, and later, man by man, a staff of employees was engaged, nearly all of whom are still in the establishment. His perseverance, business ability and punctuality in meeting the requirements of his customers gained for him that increase in business which only such qualities can insure. A company was formed, and after no less than eleven removals from place to place, necessitated by the extension of the company's operations, a three-story building on Main street was taken in 1883, and thither the firm removed its greatly enlarged plant.

And now disaster assailed the company. They had just got into good working order and full business swing, when, during the absence of Mr. Schmidt in Los Angeles, the entire plant was destroyed by fire. This was in June, 1884, and their engagements with the fruit-canning companies were extensive and had to be met. These companies, in order to obtain funds necessary to carry on their business, depend upon the delivery of labels. Canned goods cannot be shipped without bearing their respective labels, whereas when labelled and shipped, the shippers can draw drafts on them. To fulfil their engagements with the canning companies was imperative. Fortunately there happened to be for sale in the market three presses which were immediately bought and in an incredible short space of time work was renewed, engagements fulfilled, and confidence in the firm's stability and punctuality in performance of its contracts maintained.

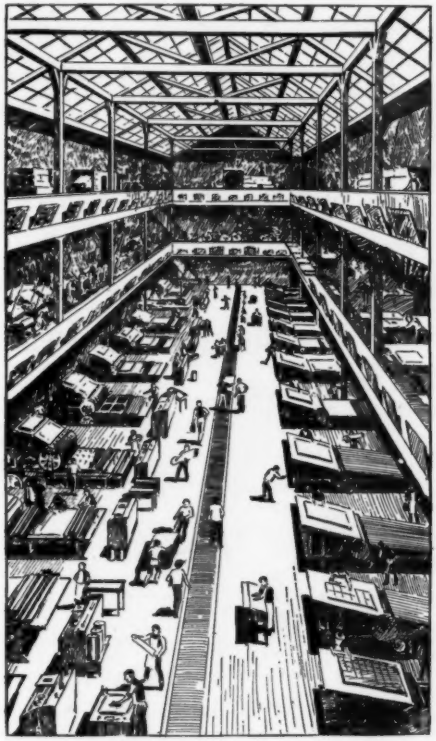
The company rebuilt, procured a spendid plant and commenced running on a larger scale and in better shape. But the house was doomed to meet with another catastrophe. In August, 1886, the entire building was again burned to the ground and the plant destroyed. Mr. Schmidt was at Sacramento at the time this occurred, on his return from a recuperating trip to the Yosemite. No sooner did he receive the unpleasant tidings than he hastened to San Francisco, succeeded in purchasing Bancroft & Co.'s plant, again began operations, and again rebuilt.

The occurrence of two such disasters in the space of two years caused the insurance companies to fight shy of issuing future policies to so unlucky a firm, and it was decided to build on a plan that would reduce the risk of fire to the minimum. The building was, in pursuance of this idea, built in three compartments, the dividing walls of which were erected in brick and are so massive as to be practically fireproof. The wisdom of this system was evident and the house finds no shyness now on the part of insurance companies. Plenty of insurance can be obtained at lower rates than ever.

In the building on Main street the central compartment is devoted to office use and the Art Rooms. The main building—for in fact each compartment may be considered as a separate edifice—contains the presses, book-bindery, storeroom, etc., while to the left of it, a three-story building is used exclusively for glossing

labels. A sixty-five horse power engine occupies the basement specially constructed for the purpose, below the press-room, which also contains all shafting and belting.

In this large and well-arranged establishment, which is the result of per-



GENERAL VIEW OF PRESS-ROOM, SCHMIDT LABEL AND LITHOGRAPH CO.

severance and courage under difficulties, 250 hands are employed. There are no fewer than thirty-five presses worked by steam power, and twenty-six hand presses, besides a great quantity of other machinery. The daily capacity is 1,000,000 glossed labels, besides great quantities of bank and commercial work, and all such products as pertain to the engravers' and printers' arts.

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An' the violet was a-droopin' an' the lily had the chills;
An' the frost was hangin' heavy where the cotton blossom shines,
An' the darky was a-weepin' by the watermelon vines.
But now jes' see the weather! In a cloud of pinks and white,
The mockin' birds are singin' an' the larks are out o' sight;
An' the cattle—they are ploddin' through the daisies in the dells,
An' a feller falls to noddin' at the tinkle o' their bells.
O, it's fine—this kind o' livin' in this blessed land o' ours;
One day you're pitchin' snowballs an' the next you're pullin' flowers!
But we take it as we find it from the Springtime to the Fall;
If we melt, we never mind it; if we freeze—we freeze. That's all.

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Disbursements

To Policy-Holders	$19,386,532 46	
For Expenses and Taxes	7,419,611 08	$26,806,143 54

The Assets are Invested as follows

United States Bonds and other Securities	$65,820,434 89
Loans on Bond and Mortgage, first lien	69,348,092 54
Loans on Stocks and Bonds	10,394,597 50
Real Estate	15,638,884 26
Cash in Banks and Trust Companies	7,806,672 55
Accrued Interest, Deferred Premiums, &c.	6,075,474 87
	$175,084,156 61

Insurance and Annuities

Insurance Assumed and Renewed	$654,909,566 00
Insurance in Force	745,780,083 00
Annuities in Force	352,036 01

Increase in Annuities in Force	$82,732 98
Increase in Payments to Policy-Holders	630,820 60
Increase in Receipts	2,604,130 71
Increase in Surplus	3,137,266 78
Increase in Assets	15,577,017 93
Increase in Insurance Assumed and Renewed	47,737,765 00
Increase in Insurance in Force	50,295,925 00

NOTE.—In accordance with the intention of the Management as announced in November, 1891, to limit the amount of new insurance actually issued and paid for in the accounts of the year 1892, to One Hundred Million Dollars, the amount of insurance in force as above stated includes the amount of such Voluntary limit with but a slight increase unavoidable in closing the December accounts.

I have carefully examined the foregoing Statement and find the same to be correct

A. N. WATERHOUSE, Auditor

From the Surplus a dividend will be apportioned as usual

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THE CALIFORNIAN

NOVEMBER 1893

EDITED BY CHARLES FREDERICK HOLDER

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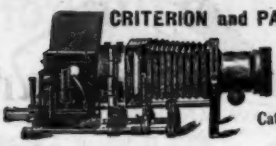
ENTERED AT THE NEW YORK POST OFFICE AS SECOND CLASS MAIL MATTER

I like the Californian from start to finish—OCTAVE THANET

THE CHRISTMAS NUMBER OF THE CALIFORNIAN will be the finest and largest issue ever produced by the magazine, one that will be suggestive of its growth and development. Among the features having local color will be a richly illustrated paper entitled **"California Through a Snowdrift,"** showing the contrasts of snow and flowers in the Golden Gate. **"The Nooks and Corners of San Francisco,"** by Elodie Hogan, **"The Midwinter Fair," "The Forest Trees,"** are all richly illustrated papers speaking of the wonders of the Pacific Coast. **"A Submarine Christmas"** is an illustrated description of the wonders of the deep Pacific and of a submarine craft, the crew of which see the actual life of the deep sea in its home. Geo. Hamlin Fitch, the well-known critic, writes on the books and authors of a year, reviewing the literary growth of this time. Theo. R. Van Reed contributes a story on the tribulations of the author. Gertrude Atherton describes delightfully the romance of Fort Ross, while **"Shark Fishing as a Sport"** forms the subject of a graphic description.

Among the verse of the issue are poems by John Vance Cheney, Chas. E. Markham, General Lucius H. Foote, and a beautifully illustrated translation of Chamisso's **"Woman and Love"** by Frank V. McDonald. Among the illustrated descriptive articles is one on the **"Jubilee of the Pope"** by Mrs. F. Barbour, **"Early Art Among the Americans"** by Prof. John Richardson, while General N. P. Chipman will write on Immigration.



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Since its very first issue the newspapers have passed favorable comment upon the CALIFORNIAN. The verdict of them all may be summarized in the exquisite compliment paid to the Editor by M. Octave Thanet:

"I like the Californian from start to finish."

The *New York Observer* in a recent number writes:

"The CALIFORNIAN has moved its [publication, not editorial] headquarters to New York, but its Californian flavor is pronounced and attractive. This magazine surprised us when we saw the first number. As regards literary ability and thoroughness, it has had no infancy. It was full fledged from the start, and has maintained its character and worth right along. The illustrations, as well as the articles, are of a high order."

Better than this the Editors could not say for themselves; but better than it ever has been readers may be assured the magazine always will be.

The Californian Illustrated Magazine

47 LAFAYETTE PLACE, NEW YORK CITY

THE AUTONOMY OF WOMAN.

IN these later years of the nineteenth century woman begins to emerge into the new social condition of autonomy; after many hundreds—who shall not say "ages?"—of years evoluting from dependence to absolutism. Had she been originally the equal of man, by nature his compeer, social organization could never have placed her in the secondary position; for she would have contended for the dominance and co-operated in the evolution. On the contrary, however, in the making of laws and in the controlling of peoples she has been but an auxiliary factor, not a prime motor.

Isolated instances of exceptions to the generality have been apparent in history; but these are premature, abnormal offspring of the course of nature: prophets of future possibilities. Cleopatra, of these, was the signal one: she who established a nation by the force of her own personality. Semiramis is another: the martial queen of the Western East. Judith, another: vindictive sponsor of the subordinate. Joan of Arc: priestess of the sanctities: inviolable. Jenny Lind: vocal dictator of the manly passions, overswayer of the human emotions. But it is only within the last decade that woman universal, reaching the age of declaration, has arisen to claim equal share with man in creation and control.

From the position of physical servitude, bestial capacity (still remnant in the Eastern Orient), she advanced to that of treasure or value in the Western East (where her face is still veiled from the public lest she be wantonly looked upon). Then in Greece—intelligent Greece—her motherhood capacities were recognized, the children consigned to her nurture, and she, in grateful offering for the gift, reared them in admiring emulation of the men. The first real stage in the approach to independence was thereby accomplished.

The mother of the Alexanders, rudely presuming on the gain already made, inspired in her children the spirit of passion that, transported over into Africa, reinflamed and set alive the Cleopatra, the sensuous mistress;

Thanksgiving Dinners.

North, South, East and West contribute representative Menus.

"Yankee."—*By Mrs. Carrie M. Dearborn, Principal of the Boston Cooking School.*

Oysters on Half Shell—Clear Soup with Custard—Olives, Pickles, Salted Almonds, Celery—Fresh Boiled Cod, Oyster Sauce, Potato Balls—Roast Turkey, Giblet Gravy, Cranberry Sauce, Mashed Potatoes, Sweet Potatoes, Squash, Turnip, Creamed Onions; Sorbet—Broiled Ducks, Orange Sauce—Lettuce Salad, Cheese Straws—Plum Pudding Mince Pie, Apple Pie, Edam Cheese—Assorted Nuts, Raisins—Coffee.

"Southern."—*By Marion Harland, Author of "Common Sense in the Household."*

Raw Oysters on the Half Shell—Old Hare Soup—Rock Fish (boiled) with Egg Sauce, Potatoes *au naturel*—Fried Chicken, Escalloped Oysters (baked in scallop shells), Black Eyed Peas, Stewed Tomatoes—Roast Turkey with Cranberry Sauce, Sweet Potatoes, Mashed Turnips, Boiled Ham (at the head of the table)—Sherbet—Partridges (quail at the North), roasted whole, each with an oyster inside. Salsify Fritters, Currant Jelly and Sweet Pickles—Cold Slaw, Crackers. Cheese and Olives—Apple Meringue Pie, Transparent Pudding, Plum Pudding—Ice Cream, Snow Balls and other Cakes, Wine Jelly, Blanc Mange—Apples, Oranges, Grapes, Nuts, Raisins—Black Coffee—*Hors d'Œuvres*, Olives, Bon-Bons, several kinds of Pickles, Candied Orange Peel and Ginger.

"Western."—*By Miss Campbell, Friendly Inn Cooking School, Cleveland, Ohio.*

Oyster Soup—Cranberry Jelly, Pickles, Olives—Hot Roast Turkey, Baked Sausages, Venison Pie, Cold Roast Turkey, Pickled Oysters, Cold Biscuit, Hot Squash Muffins, Salsify Fritters, Mashed Turnips—Celery, Chicken Salad, Pickled Quinces—Pumpkin Pie, Mince Pie, Apple Turnovers, Cheese—Fruit—Coffee.

"New York."—*By Mrs. Emma P. Ewing, Prin. Chautauqua School of Cookery.*

Clear Soup—Celery, Italian Sticks, Olives—Scalloped Oysters, Cold Slaw—Roast Turkey, Giblet Gravy, Cranberry Sauce, Mashed Turnip, Boiled White Potato, Browned Sweet Potato—Lettuce Salad, Salted Almonds, Cheese Straws—Mince Pie, Pumpkin Pie, Pine Apple Cheese—Mixed Fruit—Coffee.

"Philadelphia."—*By Mrs. Rorer, Principal Philadelphia School of Cookery.*

Oysters on Half Shell—Clear Soup—Celery, Olives, Almonds—Roast Turkey, Bread Stuffing, Oyster Sauce, Mashed Potatoes, Boiled Onions, Cranberry Jelly—Celery Salad, Wafers—Mince Pie, Pumpkin Custard, Cheese—Coffee—Nuts, Fruit, Raisins.

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against whose tyranny revolting Rome installed vestal virgins in her temples, sanctified the purities, and for future moral precept set womanly virtue fundamental: a new value of woman in the estimate of man. Nomadic Gaul invaded Rome and to its exaltation of femininity added the romance of chivalry, the feudalistic adulation of the Middle Ages; which led to the enthronement of royal female lineage in established England, associate enthronement (with insidious arrogance of sovereign power) in France. And now in democratic America the subtle force of the physical capacity, of which none is lost in history, the indisputable nurtural superiority, the beauty of the virginal idealization, the charm of the chivalric fiefdom, all combining wrest from man irrevocably the concession of independence.

Through a long history man himself has struggled for autonomy. He is only just now acquiring it absolutely. In the security of it he does not begrudge woman her independence of him. For, after the desperate and difficult contention that he has waged, the desire for peace is come upon him, the horror of arrogance, which is the enemy of peace. In the acquiring of liberty woman has learned her capabilities. Physically she has conquered man (in Egypt) and is satisfied with the consciousness thereof. Nurturally she is his mother (as she learned in Greece), responsible for him: therefore he has enshrined her; therefore he loves her. That she can rule she knows, because she has tried it. One thing more remains, then: universal suffrage. Shall she have it?

Courting peace and rest, man looks for that which shall minister them to him. Seeking power and activity, woman yearns for that wherewith she shall exercise them. The elements of peace are repose, grace, beauty. The elements of power are strength, courage, endurance. Reciprocally gaining the two, the natures of man and woman approach nearer the one to the other. In autonomy, losing submissiveness, woman lives and labors side by side with man. Forsaking and forgetting arrogance, man, in autonomy, becomes gentle and is as one with the woman. And there is an end to dissension and a beginning of peace.—*Anon.*

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WONDERLAND.

(*From the German of Heine.*)

BY F. V. MCDONALD.

From olden legends springing,
There blink, with shadow hand,
With singing and with ringing,
Weird signs of wonderland,

Where giant flowers glory
In golden evening light;
And live love's tender story
With bridal faces bright.

Where all the trees communion
In speech and song do hold,
And springs laugh too, in union,
Like dancing elves of old.

Where sounds of love, belonging
To fairy life and ways,
With strangest, sweetest longing,
One strangely, sweetly craze.

Oh, could I, free from sorrow,
But there my joy outpour,
Where happier dawns each morrow
On that blest golden shore!

Ah, fairest land elysian,
I see thee oft in dreams,
But lose thee, charming vision,
With dawn of daylight gleams.

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ONE COMPENSATION FOR HARD TIMES.

From the Northwest Magazine for September.

It was the theory of Emerson that for every good there is compensating hurt, and that for every evil there is a compensating good. Whether or not this rule applies to the whole round of human affairs, it is certain that for the evil of hard times under which we all now suffer there are to be expected—so experience teaches—some good consequences. We have only to go back to the results of the panic of 1873 to be satisfied of this. That panic and its sequence of reduced consumption, curtailed trade and prostrated industries was followed by a great movement to the new lands of the West. Multitudes of industrious, competent men were thrown out of employment by the closing of factories and the reduction of force in stores and offices. A large number of these men had savings-bank accounts or small real estate properties which they could sell. They saw no prospect for the early recovery of the depressed business energies of the country, and they thought it a wise course to realize on what they had saved and invested and strike out for the West in search of new homes and opportunities. The ten years following 1873 were years of enormous progress in the West. Those years brought to Kansas and Nebraska their second great wave of immigration. They filled up western Iowa and western Missouri. They converted the prairies of Minnesota and the eastern part of Dakota into well-settled and prosperous communities. They sent a great throng across the continent to develop agriculture and fruit growing in the valleys of California.

If the experience of the years following the panic of 1873 is now repeated we shall see, probably next spring, the beginning of a new westward movement of population. There is plenty of room for more people all along the western border of the humid region; room, too, in the many irrigable valleys in the vast arid region that lies on both sides of the Rockies, and room on the rich, open plains and in the great wooded districts of Washington and Oregon. In fact there is not a State west of the Mississippi that does not invite additional population. The life of a farmer, in these days of low prices for farm products, is not as attractive as it might be, but it at least gives assurance of food, fuel and shelter, and that is more than the life of an unemployed factory operative or mechanic can do. Besides, the world has touched the bedrock as to the prices of food. Agricultural machinery has exerted its full influence. There will be no more bonanza farms to add to the wheat surplus. There are no more unoccupied plains and foot-hills to pasture cattle and sheep. The intelligent workman knows these facts and believes that there are better times ahead for Western farmers. Many of the young men thrown out of employment in factories, mills, stores, and on railroads came from the farms and will naturally gravitate back to farming now that their former occupations no longer yield them a support.

A tide of new settlement will be a great blessing to the West. Every community is stronger for having its vacant places filled up. A well-settled dictrict means good roads, good school facilities, home labor for gathering the crops instead of tramp labor, an active social life, more cheerfulness and less loneliness. The taxes yield more money for public purposes, churches and newspapers are maintained, the little towns become more attractive, railway facilities are improved, and the whole community moves up a peg or two on the scale of civilization. If all this comes about as a result of the present hard times, then, certainly, compensation will not be lacking for the troubles which now oppress us.

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The Life of Agassiz,

BY

Charles Frederick Holder, LL.D.

Editor of the "Californian."

Author of a "Life of Charles Darwin," "Living Lights," "Elements of Zoology," "The Ivory King," "A Strange Company," etc., etc.

NOTICES OF THE PRESS:

This book is a valuable contribution to our biographical literature, and the work is most carefully and admirably done.—*American Journal of Education and Natural Educator*, St. Louis.

The book is brilliant and discriminating, and will no doubt serve as a stepping-stone by which young Americans will be led into the pleasant paths of science.—*Philadelphia Ledger.*

A worthy biography of a most worthy subject.—*Detroit Free Press.*

Professor Holder's volume is written in his usual attractive style, and will be found of interest not only to the younger people, to whom it is more particularly addressed, but to older readers also.—*Book Chat*, New York.

Dr. Holder is already well known from his numerous works on natural science and his lately-issued life of Darwin. No one could be more thoroughly in touch with his subject or better fitted to do it justice.—*Boston Journal of Education.*

Mr. Holder is a very pleasant writer; more than this, he is painstaking and discriminating. He has made a most interesting biography of the life and works of the devout philosopher. The author's purpose has been to give the story of the philosopher's life in brief and to call attention to its salient features and helpful lessons.—*New York Observer.*

One of the most useful and entertaining of the Putnams' Series of Leaders in Science is the "Life and Work of Louis Agassiz," by Charles F. Holder. Like the author's life of Darwin it is freely illustrated and supplied with maps from the scenes of the philosopher's investigations. —*Brooklyn Eagle.*

It is difficult to believe that any one having a taste for natural science can read this biography without becoming fired with a new zeal, reflected from the love of nature which Dr. Agassiz had from his early years to the day of his death.—*Buffalo Express.*

In the matter of scientific equipment Charles Frederick Holder was well qualified to write the life and work of Agassiz for the Putnam "Leaders in Science Series," being by this knowledge better able to understand the capacity of the subject of his sketch. . . . A feature of it which will be welcomed is the lavish introduction of letters of Agassiz and quotations from his works.—*Cleveland Leader.*

The biographer is an enthusiastic scientist who possesses the faculty of making his facts intensely interesting, and in this work he has added not a little to the facts already recorded in Mrs. Agassiz's "Life."—*Times-Star*, Cincinnati.

Taken as a whole no more useful life of Agassiz has been prepared, and this volume can be warmly recommended to all who wish to gain familiarity with one whose name and fame will live always.—*Boston Times.*

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THE HAWAIIAN SITUATION.

[From an interview with H. W. Whitney, published in the *Hawaiian Gazette*, September 26th, 1893. Mr. Whitney is the manager of the *Hawaiian Gazette* Company and an old resident of Honolulu.]

"My papers have supported the Provisional Government because we believe that the revolution—if the deposition of the Queen and her ministers can be so called—saved the white population from great injustice and was in the best interests of the whole people. In ex-Queen Liliuokalani's ministry there were two whites and two natives, and in the legislature of forty-eight members about half the number were whites. The principal judges and other important officials were mostly white men. The immediate source of the trouble was that the Queen proposed, by a new constitution, to dispossess the whites of their offices and to disfranchise them. This could not be tolerated, and the whites would, if necessary, have fought for their rights, but fortunately they were able to secure themselves without bloodshed.

"The men who took office were not adventurers. Associate Justice Dole of the Supreme Court, who left the bench to become president of the new government, was one of the most respected judges, and his colleagues are men of standing in the commercial world, who personally have nothing to gain, but much to lose, through giving up their time to the public affairs. Their government has been the best in twenty-five years, a fact readily admitted by Minister Blount, who came from Washington if anything prejudiced against them, but after a thorough investigation went away quite satisfied that the public business was being very wisely conducted.

"The Queen's intention had been to deprive the foreigners of the very concessions which they had forced her predecessor, King Kalakaua, to make, when in 1887 the popular indignation drove the then prime minister, the notorious adventurer Gibson, out of the country. She intended to do this by means of a new constitution so sweeping in its unjust provisions that at the first indication of trouble the only four copies in existence were destroyed or hidden. Though a reward of $500 is offered for a copy of that document the Provisional Government has not been able to secure one.

"The Queen listened to very bad advice, for she would have been handsomely dealt with after deposition had she not been so stubborn. The crown lands gave her an income of about $60,000 a year, and her salary was some $20,000, and she might still have been in receipt of these amounts but for her open hostility to the Provisional Government, which led to the cancellation of her salary some four or five months ago, but having a good income from her personal property she is still well off.

"The annual revenue of the government is about $1,500,000, made up, roughly speaking, of $500,000 from customs, $500,000 from the personal tax of $5 per head and the property tax of one per cent. on the assessment valuation, and $500,000 from rentals of government and crown lands, trade and other licenses, the school tax, land sales and miscellaneous receipts. There is only one governing body in the Islands, there being no municipal institutions, so that these figures represent the whole taxation.

"The schools are administered by a bureau of the general government. There are about 250 schools and over 10,000 scholars, with 260 teachers, half of whom are natives. English is taught in all the schools, and as education is compulsory, the rising generation will all be thoroughly familiar with the English language. The school system is admirable, and will bear comparison with that of any other country. It was one of the best achievements of the old government, which established it.

"The population of the islands is as follows: Japanese 20,900, Chinese 15,300, Hawaiian natives 34,000, besides 6,500 half-whites. Of other foreigners there are 18,500, including the Portuguese. This gives a present total population of 95,200, against 90,000 at the census of 1890. Besides the natives only the white foreigners have the right of franchise. The Japanese government has been strongly urging lately that the Japs should be given the right to vote, but to this the Hawaiian government refuses to consent.

"Though the American population is considerable, the interests of the United States are much greater in proportion; in fact they overshadow all other interests. The American capital invested is about $28,000,000, against $5,000,000 British and $2,000,000 by Germans and others. The exports are almost exclusively to the United States, and the imports from the country amount to a very considerable value.

"This capital is invested mainly in the sugar plantations, the first of which were established about fifty years ago. The sugar crop this year will be about 135,000 tons, which at $75 a ton, represents upwards of ten million dollars. All this sugar is sent to the United States, under contract made with the United States sugar trust, of which Claus Spreckels is the San Francisco agent. There is no trust in the islands, and the contracts are made with the individual planters, for five years, commencing January 1st, 1893, and under these the price paid for Hawaiian sugar, delivered in San Francisco, is to be the ruling price of Cuban sugar in New York on the same day. The sugar is sent in sailing vessels as well as in the steamers. More than one-third of the whole amount is carried in Claus Spreckels' ships. All the plantations are on a large scale, and operated mostly by incorporated companies, but in these there are a great number of small shareholders.

"Bananas are another source of wealth. They also are grown mostly by foreigners, and the Chinamen thrive on this industry. Most of the export business is handled by one firm—Marshall & Campbell. They send out about 150,000 bunches a year, worth, say, $75,000. The whole trade was with San Francisco until the new steamers gave connection with Victoria and Vancouver.

"The rice raised is largely for home consumption, this being about two-thirds of the whole crop of 30,000,000 pounds. The rest is sent to San Francisco. The rice is grown almost exclusively by Chinese, who have done wonders in this line, reclaiming great tracts of swamp lands in which the rice thrives, but which had hitherto been regarded as quite useless. The Chinese rent the lands, often paying from five dollars to ten dollars a year per acre, and get rich upon the proceeds.

"Sheep raising is another important industry, and the family of Sinclairs alone have 150,000. The wool produced is of superior quality and commands a good price. It is sent to San Francisco.

"Other articles of export are molasses, hides, pineapples, oranges, and other fruits. The alligator pear, which grows in great profusion, is very much in favor, but is not yet exported except in small lots, for want of cold storage facilities. As an instance of the value set upon this fruit by those who once acquire a taste for it, it may be mentioned that cases are shipped in the refrigerators of Spreckels' boats on each trip for the use of his family and friends.

"The total exports of the islands amount to some $10,000,000 a year on the average, and the imports to $5,000,000. At this rate the Hawaiian Islands would soon become very rich, but as the producing capital is partly owned abroad, of course a portion of this profit goes out of the country in interests and dividends. There remains, however, enough to appreciably increase the general wealth year by year.

"The native Hawaiians have the reputation of being spendthrift and improvident, and they very generally deserve it, for it seems an impossibility for them to keep money. A change for the better is gradually being worked, thanks to the savings-bank system, which is popular and producing good results. The number of accounts open for natives, and the amount on deposit, are growing annually, and to encourage the habit of thrift the government allows on small accounts a very liberal interest, lately increased to as high as six per cent., so that the money would not be withdrawn because of the general disturbance of business."

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PROFIT OF FRUIT-GROWING IN CALIFORNIA.

The large profits realized by California fruit-growers make a ten or twenty acre lot equal in value to a farm of a quarter-section in the grain-growing States. The average yield is from $100 to $300 per acre yearly, while exceptional cultivation and some varieties of fruits bring the astonishing yields of $500 to $1,000 per acre. The fruit industry, too, has been found to be one of the safest and surest in the United States. It is a common thing in the older colonies to find colonists living in luxury upon a twenty-acre tract, while those owning larger acreages are rapidly accumulating wealth.

THE FIRST TRACT DISPOSED OF.

As the above facts came to be generally understood, there was no delay on the part of the people in taking these lands, so that in a very short time the entire tract of 3,060 acres was taken in lots of five acres and upwards. One thousand acres was planted to raisin grapes in the winter of 1890 and this winter ('90 and '91) the remaining 2,060 acres will be planted to grapes, figs and other fruits.

LAND VALUES.

The fact of such large profits from California lands makes their cultivation mean far more in this country than in those of the grain-growing States. Land that will yield a yearly income of $100 per acre is worth at least $500 per acre. Estimating upon the basis of a ten per cent. profit upon the capital invested, it is worth $1,000, but to say $500 is making it strong enough. Now grain-growing land throughout the West is not worth more than $40 to $60 per acre and one cannot take up new land worth $15 to $25 and make it worth in three or four years even $40 unless it be in exceptional instances; whereas in California, land that is worth $100 per acre raw, is certainly worth $500 within three years' time if properly set to fruits and well tended, and double that time will make it worth $1,000. This is one of the secrets of rapid money-making in California. The practical question, however, which presents itself to one unable to move to this country, either from lack of means or from business, such that it is impossible to leave it for a time, is

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We have solved this question in the plan of our colonies. We take a large tract, divide it into small lots, taking five acres as our unit, and dispose of the whole tract in five-acre lots, or of any number of them in one body, asking only that the means necessary to plant out the land and cultivate it for three years be paid as needed to perform the work. We do all the work and care for the crops until they have yielded enough to pay for the land, when it is then deeded to the purchaser costing him in actual cash outlay the price named for cultivation. He has not

needed to undergo the expense of removal, erection of buildings, cash payment upon land, nor the many expenses incidental to individual operation. On the other hand, if he be a poor man, he is left at his regular employment, thus assuring him his support and enough means to keep up the expense of cultivation, and when he is ready to remove to his land, it is yielding him a nice income instead of demanding large outlays. Or, if one simply takes land in this colony as an investment, not intending to make it his home, he will procure a property which will yield him each year as much as it has cost him in cash outlay. Thus it will be seen that while it brings within reach of the colonist all the advantages of the ordinary colony, it lessens the expense of acquiring such a property to half or one-third the actual cash outlay usually required. The idea is that of co-operation in all the expense until the property is brought up to a producing condition and the land is paid for, when it becomes the individual property of the subscriber. It is evident that to purchase a large tract of land it may be had on better terms than a small one; also that by doing the work on a large scale, under one management, not only may the cost be brought down much lower than if it were all done under individual ownership and management, but that more uniform results may be secured; besides every one knows that the greatest bar to individual enterprise of this sort is the comparatively large outlay necessary to begin. The great number of people who live upon a salary and never can save enough to undertake the work of procuring such a home is very large, and without such a plan as this they can never hope to become independent land-owners.

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Richard H. McDonald, Jr., vice-president of the Pacific Bank of San Francisco, has during the past few months contributed to the *Californian* a number of interesting and scholarly articles on the Nicaragua Canal and other political and economic topics.—*New Era*, Benicia.

These essays, besides discussing the Nicaragua Canal, cover quite a range of economic subjects, the topics being "Is Labor in Danger?" "Regulation of Railway Charges," "How to Secure Good Municipal Government," "Political Duty of Californians," "Our Commercial Growth and the Tariff," from both a Republican and Democratic standpoint; "Ballot Reform" and "The Danger to the Republic." There is much matter in the pamphlet for thoughtful people to consider.—*Times*, Los Angeles.

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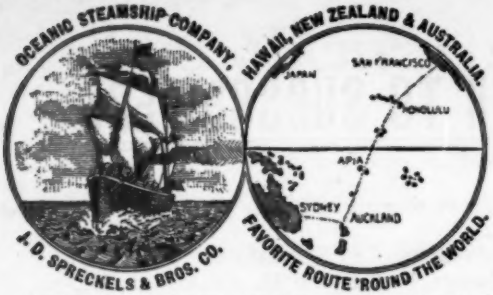

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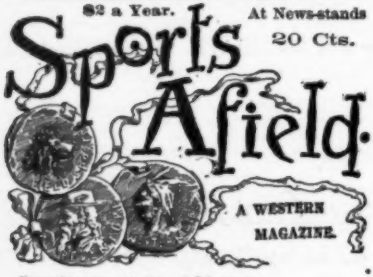

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